Technical Paper No. 485

Subsistence Harvests of Pacific Halibut in Alaska, 2020—DRAFT

by
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and
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November 2021

Alaska Department of Fish and Game

Division of Subsistence

Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in Division of Subsistence reports. All others, including deviations from definitions listed below, are noted in the text at first mention, in the titles or footnotes of tables, and in figures or figure captions.

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. states	two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mideye-to-fork	MEF
mideye-to-tail-fork	METF
standard length	SL
total length	TL

Mathematics, statistics

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

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by

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November 2021

Development and publication of this manuscript were partially financed by the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, under award number NA18NMF4370086.

The Division of Subsistence Technical Paper Series was established in 1979 and represents the most complete collection of information about customary and traditional uses of fish and wildlife resources in Alaska. The papers cover all regions of the state. Some papers were written in response to specific fish and game management issues. Others provide detailed, basic information on the subsistence uses of particular communities which pertain to a large number of scientific and policy questions.

Technical Paper series reports are available through the Alaska Resources Library and Information Services (ARLIS), the Alaska State Library, and on the Internet: http://www.adfg.alaska.gov/sf/publications/. This publication has undergone editorial and professional review.

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This document should be cited as:
Sill, L. A. and D. Koster. 2021. Subsistence Harvests of Pacific Halibut in Alaska, 2020—DRAFT. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 485, Anchorage.

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ACKNOWLEDGMENTS

First and foremost, we thank the thousands of individuals who took the time to voluntarily respond to the mailed survey form or to be interviewed. This report would not be possible without their cooperation.

We also thank the staffs of the NMFS Restricted Access Management (RAM) Program and the Information Services Division, who administer the Subsistence Halibut Registration Certificate (SHARC) program and helped provide information to the public about the research.

We would especially like to acknowledge the contributions of the residents of the communities of Ketchikan, Sitka, Tununak, and Nightmute. We express our sincere gratitude to the tribal governments of these communities: Ketchikan Indian Community, Sitka Tribe of Alaska, Native Village of Tununak IRA Council, and the Native Village of Nightmute Traditional Council. The project's success directly depended upon these organizations' approval of our research, as well as their support and assistance during data collection. The staff of these organizations and the local research assistants who administered the surveys were invaluable to achieving the project's goals.

In addition to the coauthors of this report, other Alaska Department of Fish and Game (ADF&G) Division of Subsistence staff who assisted with research, data management, and report preparation included Margaret Cunningham, Halia Janssen, Devin Anderson, David Runfola, Jeff Park, Caroline Brown, and Adam Knight. Pamela Amundson provided project administrative support. Jim Fall, the principal investigator for this project and lead author of the report from the first year of the project until his retirement from ADF&G in 2020, graciously continued to provide his support and insight for this year's research and report.

ABSTRACT

This report describes the results of a project to estimate the subsistence harvest of Pacific halibut *Hippoglossus stenolepis* in Alaska in 2020. The National Marine Fisheries Service adopted rules governing subsistence halibut fishing in 2003. Subsistence halibut harvest data were collected through a voluntary survey mailed to all holders of Subsistence Halibut Registration Certificates (SHARCs), supplemented by interviews in four communities. The survey response rate was 63% (5,127 surveyed of 8,135 potential halibut fishers). An estimated 3,777 individuals participated in the subsistence fishery for halibut in 2020, down 8% from 4,094 in 2018. The estimated harvest in 2020 was 27,241 halibut, comprising 530,757 lb (net weight; ±4.2%). This was the lowest harvest estimate since the new regulations were adopted in 2003 and, as expressed in pounds net weight, 41% below the previous 13-year average. Of the total subsistence halibut harvested in 2020, 75% were harvested with setline gear and 25% with hand-operated gear. As in all previous study years, the largest portion of the Alaska subsistence halibut harvest in 2020 occurred in Regulatory Area 2C (Southeast Alaska), 55%, followed by Area 3A (Southcentral Alaska), 33%. Subsistence harvests represented about 2.0% of the total halibut removals in Alaska in 2020.

In response to a survey question concerning whether respondents' needs for halibut were met in 2020, 51% of respondents said they met their needs, and 49% said they did not. However, just 35% of tribal SHARC holders reported meeting their needs for halibut, compared to 56% of rural SHARC holders. Among all respondents, family/personal reasons, lack of effort, and inoperative equipment were the most-cited reasons for not meeting needs. Many respondents who reported lack of effort did not offer further explanations to link to personal circumstances, resource status, competition, or equipment issues, among other possibilities. Among all respondents, 12% cited the COVID-19 pandemic as a reason for not meeting their needs.

The harvest estimates based on the surveys for 2003–2012, 2014, 2016, 2018, and 2020 serve as a basis for understanding the overall harvest, annual variability in catch, and trends in harvests since implementation of the 2003 regulations. Due to budget constraints, surveys to estimate subsistence halibut harvests in Alaska in 2013, 2015, 2017, and 2019 did not take place and a survey will not occur for 2021. The report recommends that monitoring of the subsistence harvest of halibut in Alaska be resumed in the future. The report also recommends that additional research take place to better understand trends in the subsistence halibut fishery, including reasons for lack of fishing effort among many SHARC holders, declining numbers of SHARCs issued, and lower subsistence harvests.

Key words: Pacific halibut, *Hippoglossus stenolepis*, subsistence harvests, Alaska

1. BACKGROUND AND METHODS

Background

The primary goal of this project was to estimate the subsistence harvests of Pacific halibut *Hippoglossus stenolepis* in Alaska in 2020 through a survey mailed to registered subsistence halibut fishers; the survey was supplemented by interviews in selected communities. This was the 14th year for which this research was conducted (see Fall et al. [2004; 2005; 2006; 2007], Fall and Koster [2008; 2010; 2011; 2012; 2013; 2014; 2018; 2020], and Fall and Lemons [2016] for the results of all study years). Due to lack of funds, harvest estimates were not developed for 2013, 2015, 2017, or 2019. The Alaska Department of Fish and Game (ADF&G) Division of Subsistence administered the project through a grant from the National Oceanic and Atmospheric Administration (NOAA) (award number NA18NMF4370086).

In Alaska's coastal areas, subsistence halibut fisheries are local, noncommercial, customary and traditional food fisheries, as noted by Wolfe (2002) and described in *Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for a Regulatory Amendment for Defining a Halibut Subsistence Fishery Category* (an "EA/RIR/IRFA") by the North Pacific Fishery Management Council (NPFMC), ADF&G, International Pacific Halibut Commission (IPHC), and the National Marine Fisheries Service (NMFS), August 11, 2000 (NMFS 2000); see also North Pacific Fishery Management Council (2003). The EA/RIR/IRFA summarizes information about the subsistence halibut fishery in Alaska. This background information is not repeated here but provided the basis for the NPFMC's recommendation for subsistence halibut fishing regulations in Alaska. Figure 1 illustrates IPHC halibut regulatory areas in Alaska.

In April 2003, the NMFS, Alaska Region, published federal regulations implementing a subsistence halibut fishery for qualified individuals in the waters in and off Alaska (68 FR 18145, April 15, 2003; see https://www.federalregister.gov/documents/2003/04/15/03-8822/pacific-halibut-fisheries-subsistence-fishing#p-1). Current regulations state that persons eligible to subsistence halibut fish include: 1) residents of rural communities with customary and traditional uses of halibut (rural); and 2) members of federally recognized Alaska Native tribes with customary and traditional uses of halibut (tribal). In total, residents of 118 rural communities and members of 123 Alaska Native tribes are eligible to participate in the fishery.[1] (See Appendix A for a list of eligible tribes and communities as they appeared in the Federal Register in 2003.) On November 4, 2009, the U.S. Department of Commerce published a final rule (74 FR 57105, November 4, 2009), effective December 4, 2009, modifying eligibility requirements for participation in the Alaska subsistence halibut fishery. The action allowed rural residents who live outside the boundaries of the specified 118 communities to participate if they live within the boundaries of rural areas defined in §300.65(g)(3).

Subsistence halibut fishers are required to obtain a Subsistence Halibut Registration Certificate (SHARC) from the Restricted Access Management (RAM) Program office of NMFS prior to fishing.[2] Two separate types of SHARCs are issued: tribal SHARCS are issued to members of the 123 recognized tribes, regardless of where the tribal member lives; rural SHARCs are issued to anyone living in one of the 118 specified

1. In December 2004, the NPFMC adopted a recommendation to the Secretary of Commerce to add Naukati Bay to the original list of 117 eligible rural communities. Regulations implementing this change went into effect in 2008, resulting in 118 rural communities eligible for a portion of 2008 and all subsequent years. Also, note that the Northern Pacific Halibut Act of 1982, under which the Alaska subsistence halibut fishery regulations are authorized, provides for fair and equitable allocations of halibut among U.S. fishers, but does not establish priorities for those allocations (70 FR 16742, April 1, 2005; see https://www.federalregister.gov/documents/2005/04/01/05-6507/pacific-halibut-fisheries-subsistence-fishing, page 16,743).
2. The subsistence rules were amended in 2005 by regulations published in the Federal Register at 70 FR 16742, April 1, 2005. Among other things, this amendment provides for obtaining Community Harvest Permits, Ceremonial Permits, and Educational Permits.

communities or with the boundaries of designated rural areas. In addition to SHARCs, NMFS also issues special halibut permits for community harvests, ceremonial harvests, or educational harvests. Federal regulations (50 CFR Part 300.65(h)(4)) also authorize periodic voluntary surveys of SHARC holders in order to estimate annual subsistence harvests and related catch and effort information.

Table 1 provides population estimates for the eligible rural communities for 2000, 2010, and 2020 based on the federal decennial censuses. Population estimates have increased slightly over time, and the percentage of the population that identify as Alaska Native as has remained remarkably stable. In 2000, the total population of these communities was 82,707, of which 38,990 were Alaska Natives (47%). For 2010, the federal census reported a total population of 84,353 for eligible rural communities and areas, including 40,053 Alaska Natives (47%). Finally, the reported 2020 population was 85,687 for these communities, including 43,079 Alaska Natives (50%) (U.S. Census Bureau 2021). In addition, the nonrural communities of Juneau and the Ketchikan Gateway Borough (excluding Saxman, whose residents are eligible) in 2020 had Alaska Native populations of 6,795 and 2,312, respectively (ADLWD 2021), most of whom were eligible to participate in the federal subsistence halibut fishery through their tribal membership. Also, an unknown number of eligible tribal members lived in other nonrural communities, such as Anchorage and places within the Kenai Peninsula Borough, or outside of the state.

Project Objectives

The primary goal of the project was to estimate the subsistence harvest of halibut in Alaska during the calendar year 2020. Funding for 2020 totaled $135,000. In addition to three rounds of survey mailings, outreach and supplemental interviewing occurred in Sitka and Ketchikan in Area 2C, and Tununak and Nightmute in Area 4E. The project objectives for 2020 were:

1. Produce an estimate of the subsistence harvest of halibut in Alaska in 2020 by community, tribe, gear type, and IPHC regulatory area, along with an estimate of the number of individuals who subsistence fished for halibut in 2020.
2. Produce an estimate of the harvest of halibut by SHARC holders while sport fishing in 2020.

An objective from previous study years to estimate lingcod and rockfish harvests by subsistence halibut fishers was dropped after the 2012 study year.

Data Collection Methods

Public Outreach

Information about subsistence halibut fishing in Alaska is available on the NMFS website (see https://www.fisheries.noaa.gov/alaska/sustainable-fisheries/subsistence-halibut-fishing-alaska).

In past project years, for additional outreach, division staff traveled to communities in Southeast Alaska and western Alaska to hold meetings with tribal officials about the importance of the survey as well as the SHARC program. Due to local concerns and precautions regarding COVID-19, these conversations were held over the phone or videoconference. Division staff worked with the tribal governments of Sitka and Ketchikan in Southeast Alaska (Area 2C), and the western Alaska (Area 4E) tribal governments of Nightmute and Tununak.

Postal Household Survey

As recommended by Wolfe (2002), the survey methodology was based upon a registration system for subsistence halibut fishers, which requires fishers to obtain a SHARC before fishing under federal subsistence halibut regulations. In total, 8,078 individual SHARCs were issued for 2020 (see section "Sample Achievement" below). All individuals who held a SHARC for any portion of 2020 were mailed a retrospective recall survey covering a 12-month harvest period: calendar year 2020.

The 2020 survey instrument was very similar to the form used in past study years. It is based on recommendations by Wolfe (2002:Appendix A), with slight modifications, such as project year and return

address. (See Appendix B in this report for a copy of the 2020 survey instrument.) Wolfe (2002:15–18) provided justification for the kinds of data to be collected, which include name and address of the fisher; halibut harvests in numbers and pounds round (whole) weight by gear type in 2020; and number of hooks usually set. Since the beginning of the program, some questions have been added and some removed. In 2003, a question addressing the water body fished (primary location) while subsistence fishing was added at the recommendation of NMFS staff. This question was retained in subsequent study years. Another survey question was added in 2004 to record the location of sport halibut fishing by SHARC holders.[3] For 2009, a new question was added about the number of trips taken for subsistence halibut fishing in the study year. This question was retained for all later study years. Questions about harvests of lingcod and rockfish taken while subsistence fishing for halibut, asked for 2003–2012, were excluded beginning in 2014 because the resulting data was of marginal value and in order to keep the survey streamlined. In 2018, at the request of NOAA, questions about whether households' needs for halibut during the study year were met and reasons why, if not, were added. These questions were retained for the 2020 study year.

A short explanatory letter with instructions on the back for completing the survey was included in the mailings (Appendix B). The survey was designed so that it could be directly returned to the Division of Subsistence, postage paid. For the 2020 study year, SHARC holders were also given the option to respond to the survey through an online form.

Presently under IPHC regulations, Community Development Quota (CDQ) fishers may retain halibut under 32 inches (U32; formerly called "sublegal" or "shorts") while commercial CDQ fishing in areas 4D and 4E only. These regulations require the CDQ organization to report this harvest to the IPHC. To avoid double counting, subsistence fishers were instructed not to include these fish on their subsistence halibut survey.

Table 2 provides a chronology of key activities during the project. Table 3 provides a summary of response rates by mailing, SHARC type (rural or tribal), and place of residence. The first mailing to 8,078 SHARC holders occurred on January 13, 2021. The second mailing to 4,466 SHARC holders occurred on March 16, 2021, and a third mailing to 3,456 SHARC holders occurred on May 13, 2021.

The Division of Subsistence created a dedicated e-mail address that recipients of the postal survey could use if they had questions about how to respond. Also, the RAM Program set up a toll-free telephone number (1-800-304-4846) to provide information about the subsistence halibut program, including the harvest assessment program. Both the e-mail address and toll-free telephone number appeared on the survey. A set of "frequently asked questions" and responses was developed by ADF&G and NMFS staff members to guide staff responses to telephone calls and e-mail inquiries about how to fill out the survey form (Appendix C [FAQ]; Appendix B [survey]).

Community Visits and In-Person Surveys

Because the response rates to the postal survey vary by community and tribe, the mailings were again supplemented in selected communities with household surveys conducted by division staff or by local research assistants (LRAs) hired through subcontracts with Alaska Native tribes. Because of the large number of eligible communities and tribes, it was not possible to conduct surveys in most communities.

Sitka and Ketchikan

In Southeast Alaska (Area 2C), staff from the Sitka Tribe of Alaska (STA) and from the Ketchikan Indian Corporation (KIC) administered surveys in Sitka and Ketchikan, respectively, with SHARC holders who had not returned the mailed form. Subsistence Resource Specialist (SRS) Lauren Sill spoke with the STA Resource Protection Director in February 2021 to discuss the possibility of conducting subsistence halibut surveys in Sitka during spring 2021. STA approved of the surveys and were able to provide staff that had conducted the surveys during past study years. A project services agreement was signed by the division and STA and in place by May 11. Sill emailed with the Cultural Resources director of KIC to confirm the

3. The survey was designed to reduce the potential double counting of halibut taken with rod and reel gear, which could be reported in both the subsistence survey and in the ADF&G Division of Sport Fish Statewide Harvest Survey (Wolfe 2002:19).

community's interest in participating in the subsistence halibut surveys for 2020. Due to COVID-19, plans were made with both tribal governments to review the survey, provide training, and answer staff questions remotely. This entailed phone conversations, videoconferences, and email communications. Sill mailed paper surveys and the list of SHARC holders to STA and KIC in early May. The surveys were administered by telephone. STA staff completed 120 surveys with SHARC holders and KIC staff completed 91. All of the surveys took place during May and June. Completed surveys were mailed to the ADF&G Douglas office for processing and forwarded on to the Anchorage office for data entry and analysis.

Tununak and Nightmute

The proposed study communities for subsistence halibut surveys in western Alaska were Toksook Bay and Tununak. SRS Dave Runfola contacted the Nunakauyak Traditional Council (TC) in Toksook Bay and the Tununak Indian Reorganization Act (IRA) Council in February to schedule project approval meetings. Both councils scheduled Runfola to present during their meetings in March 2021. During its March 18 meeting, the Tununak IRA council approved the proposed survey fieldwork to be conducted as soon as the tribal administrator and SRS Runfola could identify and train two local research assistants. The Nunakauyak TC canceled both the March and April meetings, the latter of which SRS Runfola had also been scheduled to present. Upon cancellation of the April meeting in Toksook Bay, SRS Runfola scheduled to attend their meeting in May; however, to avoid the possibility of failure to acquire fieldwork approval for a second study community, Runfola also scheduled a project approval meeting with the Nightmute TC. On March 24, the Nightmute TC approved the proposed study and confirmed that it would proceed in their community as soon as possible.

To prevent the possibility of transmission of the COVID-19 virus between staff and study community residents, ADF&G staff planned on not traveling to the study communities. Division researchers prepared to conduct training telephonically with LRA recruits and supervise their survey efforts remotely. Division research staff prepared all materials needed for LRA training, completion of surveys, distribution of SHARC applications, and personal protective equipment needed for LRA and survey respondent safety. In May, staff shipped all materials to study communities and remotely trained and supervised two LRAs in Tununak and one LRA in Nightmute. Tununak LRAs completed approximately 12 surveys; then both declined to continue fieldwork. Subsequently, SRSs Runfola and Jeff Park regularly contacted IRA council staff in attempts to recruit additional LRAs. Following several unsuccessful attempts to do so, SRS Park called phone numbers on record for current and former Tununak resident SHARC holders. Park called 69 potential survey respondents; he made contact with 42 and completed surveys with 29 respondents. Of the 13 people he called but did not survey, 7 refused the survey and 6 were not surveyed for various reasons (e.g. they had moved out of the community). In Nightmute, SRS Runfola remotely supervised one LRA who attempted to survey 51 known halibut fishers. Of these attempted contacts, 29 fishers completed a survey, 11 declined to participate, and 11 were unavailable for surveys. No residents in either Tununak or Nightmute elected to complete a SHARC application. All surveys and field materials were returned to Fairbanks staff. Surveys were processed for analysis in Fairbanks and forwarded to division analysts in Anchorage.

Sample Achievement

Table 3 reports sample achievement by tribe, rural community, and community of residence. Overall, 5,127 surveys were completed by 8,135 potential participants in the fishery, including SHARC holders, and identified potential halibut fishers who did not hold SHARCs in two communities. The response rate was 63% (Figure 2). For residents of the 118 eligible rural communities and eligible rural areas who did not register as tribal members, 3,891 of 5,526 potential surveys were completed (70%) (Table 3; Figure 2). As shown in Figure 3, there were 10 communities with more than 100 nontribal SHARC holders in 2020, accounting in total for 4,593 SHARCs (83% of all nontribal SHARCs issued in rural communities; Table 3). Return rates were 65% or more in all 10 of these communities.

Of the 2,609 tribal members who were listed as potential participants in the fishery in 2020, 1,236 (47%) were surveyed (Table 3; Figure 2). As shown in Figure 3, there were 13 tribes with 50 or more potential subsistence fishers. Return rates for these 13 tribes varied widely, from 78% in Wrangell to 23% for Pauloff

Harbor Village based in Sand Point. In total, these 13 tribes accounted for 1,769 SHARCs, or 68% of all tribal SHARCs and potential fishers (Table 3).

Figure 4 illustrates survey response rates by place of residence of SHARC holders for the 16 communities with more than 100 SHARC holders (tribal and nontribal) in 2020. These communities accounted for 6,525 SHARCs (80% of all potential fishers; Table 3) and 4,252 returned surveys (83% of all returned surveys; Table 3). Response rates were higher than 50% in all but three of these communities; in 10 of these communities, response rates exceeded 60% (Figure 4).

Figure 5 shows the survey return rate by response category (see also Table 3). After the first mailing, 3,527 surveys were returned—a response rate of 44%. Responses to the second mailing added 693 surveys, and the third mailing produced 248 responses, for a total mailed response to the postal survey of 4,468 surveys, or 55% of all potential respondents. In addition, surveys administered by representatives of tribes and ADF&G staff added 221 surveys. Adding in the 438 surveys returned on-line brought the total response to 5,127 surveys, 63% of the sampling goal. The overall response rate for the survey for 2020 decreased slightly from 68% in 2018.

The number of surveys returned as "undeliverable" was 211 in 2020 (Table 3). Subtracting "undeliverables" from the mailed survey target of 8,078 gives a response rate of 65.2% in 2020, compared to 69% in 2018, 70% in 2016, 68% in 2014, 70% in 2012, and 68% in 2011. Removing "undeliverables" from the total survey goal (8,135) results in a response rate of 64.7%.

Data Analysis

Data Entry

All returned surveys were reviewed for completeness prior to data entry. Responses were coded following standardized conventions used by the Division of Subsistence. Staff within the Information Management Section of the division set up database structures within Microsoft (MS) SQL Server[4] at ADF&G in Anchorage to hold the survey data. The database structures included rules, constraints, and referential integrity to ensure that data were entered completely and accurately. Data entry screens were available on a secure internet website. Daily incremental backups of the database occurred, and transaction logs were backed up hourly. Full backups of the database occurred twice weekly. This ensured that no more than one hour of data entry would be lost in the unlikely event of a catastrophic failure.

Survey responses were manually entered twice, and survey forms were electronically scanned. All data were compared programmatically for inconsistent data entry. Double data entry ensured a more accurate transfer of information from the coded survey forms into the database and is a standard Division of Subsistence practice. Data did not pass to the processing phase until inconsistencies within the twice-entered data set were eliminated. The scanned survey forms also facilitated efficient data correction and editing.

Information was processed and analyzed using the R programming language, version 4.0.3 and the 'Tidyverse' library version 1.3.0. Initial processing included the performance of standardized logic checks of the data. Logic checks are often needed in complex data sets where rules, constraints, and referential integrity do not capture all of the possible inconsistencies that may appear.

Analysis: Development of Harvest Estimates

Analysis included review of raw data frequencies, cross tabulations, table generation, and estimates of population parameters. Missing information was dealt with on a case-by-case basis. The Division of Subsistence has standard practices for dealing with missing information, such as minimal value substitution or use of an average response for similarly characterized households or communities. Typically, missing data are an uncommon, randomly occurring phenomenon in household surveys conducted by the division, as was the case in this project.

4. Product names are included for scientific completeness and do not constitute an endorsement.

In general, estimates of harvests, levels of participation, and other findings were calculated based upon the application of weighted means (Cochran 1977). These calculations are standard methods for extrapolating sampled data. In this project, each tribe and rural community was a separate stratum for purposes of estimating total harvests. In most cases, the mean for returned SHARC surveys was applied to the total number of SHARCs issued for the tribe or community to calculate the estimated harvest. The formula for standard expansion of community harvests is:

$$H_t = \sum H_i \tag{1}$$

$$\text{where } H_i = h_i W_i \tag{2}$$

$$\text{and } W_i = \frac{N_i}{n_i} \text{ (Harvest weight factor per strata i)} \tag{3}$$

Where

H_t = the total harvest (numbers of fish or pounds),

H_i = the total harvest, numbers or pounds, for tribe or community i

W_i = the weight factor for tribe or community i,

h_i = the total harvest, numbers or pounds, reported in returned surveys for tribe or community,

n_i = the number of returned surveys in each tribe or community, and

N_i = the number of SHARCs issued for tribe or community.

The following instances are exceptions. First, 63 SHARCs were held by eligible tribal members living outside of Alaska (Table 3). Of these, 50 postal surveys were returned from this group, and only eleven of these returned surveys indicated any subsistence fishing activity. Rather than assign the mean value for their tribe (which would likely result in an overestimate of the harvest), all nonreturned surveys for SHARC holders with out-of-state addresses were coded as "did not fish."

Second, all SHARC holders were divided into two categories based upon the expiration date of their SHARC. SHARCs having an expiration date falling within the project period and that were not renewed were treated as a separate stratum from other SHARCs for the purpose of generating harvest estimates. This was done to account for potential bias and resulting overestimation of harvests for SHARCs that were fished for only part of the year. During 2020, 1,279 rural and 455 tribal SHARCs expired and were not renewed; of those, 781 (61%) rural SHARCs and 164 (36%) tribal SHARCs participated in the survey. Of those survey respondents with rural SHARCs that expired, 33% participated in the subsistence fishery, as did 30% of survey respondents with expired tribal SHARCs.

The RAM Program issued two community or ceremonial permits for 2018; both were returned with data. Harvests from the two permits were added to the estimates for the tribe of the permit holders because they are not reported by individuals in their response to the SHARC postal survey. Data from these permits were returned directly to RAM Program, and RAM Program provided the data to ADF&G for the analysis. They are classified as "returned through staff" in Table 3.

It should also be noted that not every individual who obtained a SHARC as a tribal member resided in the community where his or her tribe's headquarters is located. Therefore, the sum of harvest estimates for tribal SHARC holders and rural resident SHARC holders does not necessarily equal the halibut harvest for particular communities of residence. Rather, an additional analysis was necessary to estimate harvests by community of residence that assigned tribal SHARC holders to a community based on their mailing addresses. Appendix tables D-2, D-3, and D-4 report results by place of residence of the SHARC holders.

The standard deviation (*SD*; or Variance [*V*], which is the *SD* squared) of the harvest was calculated with the raw, unexpanded data. The standard error (*SE*), or *SD* of the mean, was also calculated for each community or tribe. This was used to calculate the relative precision of the mean, or the likelihood an unknown value falls within a certain distance from the mean. In this analysis, the relative precision of the mean is shown in the tables as a confidence interval (*CI*), expressed as a percentage. Once the standard error was calculated, the *CI* was determined by multiplying the SE by a constant that reflected the level of significance desired, based on a normal distribution. The constant for 95% confidence intervals is obtained from look-up tables using a 2-tailed alpha of .95 and n-1 degrees of freedom where n is the size of the sample. Though there are numerous ways to express the formula below, it contains the components of a *SD*, *V*, and *SE*.

Relative precision of the mean (*CI*%):

$$CI\%(\pm) = \frac{t_{\alpha/2} \times \frac{s}{\sqrt{n}} \times \sqrt{\frac{N-n}{N-1}}}{\bar{x}} \tag{4}$$

$$s = \sqrt{\sum_{i=1}^{n} \frac{\sum(x_i - \bar{x})^2}{n-1}} \tag{5}$$

Where

s = sample standard deviation

x_i = reported amount harvested by individual SHARC holders

$\bar{x}$ = mean harvest

n = total sample size

N = total population size

n_i = tribal or community sample size

$t_{\alpha/2}$ = Student's t-statistic for alpha level (α=0.95) with n–1 degrees of freedom.

Project staff explored the possibility of nonresponse bias for returned mail-out surveys and its effect on harvest estimates (see Appendix F in Fall and Koster [2014] for further discussion of responses by response category for previous study years). However, it was determined that responses to the survey, including harvest levels and involvement in the fishery, were not notably different between any of the response categories (responses to the first mailing, the second mailing, the third mailing, and staff-administered surveys).

As noted above, survey respondents provided harvest estimates in pounds round (whole) weight. For ease of comparison with estimates of halibut removals in other fisheries, we have converted these estimates to pounds net (dressed, head off) weight, where 0.75 × round weight = net weight.[5]

5. The factor of 0.75 for converting halibut round weight to net weight is the standard used by the IPHC and ADF&G Division of Sport Fish. Division of Subsistence studies, as reported in the Technical Paper series and in the Community Subsistence Information System (CSIS)*, generally use a factor of 0.72 for converting halibut round weights to net weights, based on Crapo et al. (1993:7), who reported that, on average, the weight of a dressed halibut with the head removed is 72% of the round weight, with a range of 68% to 80%. In Division of Subsistence Technical Papers, "net" weight (dressed, head off) is usually referred to as "usable weight."

   * CSIS: http://www.subsistence.adfg.state.ak.us/CSIS/. The CSIS was formerly the Community Profile Database (referred to as CPDB) (Scott et al. Unpublished).

There was a single, open-ended question asking respondents who reported not meeting their needs to provide reasons why. Responses were entered into the database verbatim and then coded by topic for analysis using standard codes developed by the division for other projects. Two division staff coded the open-ended responses independently; coding decisions were compared and differences rectified. Responses to the "needs met" questions were not weighted by tribe or rural community for analysis.

Products

The public review draft of this final report was completed in November 2021 and circulated for review and comments. The draft report was also posted on the Division of Subsistence website. A presentation of the project findings and recommendations occurred at the December 2021 meeting of the NPFMC, held virtually. The final report was revised in consideration of comments and suggestions received from reviewers of the public review draft. In addition to the final report, a short findings summary was prepared (Appendix E). The summary was sent to tribal government representatives and other interested individuals and groups. This report was posted on the Division of Subsistence website and the RAM Program website in PDF format for downloading and printing by the public. Printed copies of this report were sent to the Alaska Resources Library and Information Services.

2. FINDINGS

Subsistence Halibut Harvests In 2020

Estimated Number of Subsistence Halibut Fishers

Of the 8,135 individuals who were potential subsistence halibut fishers in 2020, an estimated 3,777 (46%) participated in the subsistence halibut fishery (Table 4). Of the 2,609 individuals who were members of an eligible tribe, an estimated 1,015 participated in the fishery (39%). Of the 5,526 individuals who qualified as residents of rural communities, an estimated 2,762 (50%) participated in the subsistence fishery for halibut in 2020. The estimated total of 3,777 subsistence halibut fishers in 2020 is the lowest estimate since the SHARC program began in 2003, and an 8% decrease from the estimate of 4,094 fishers in 2018 (Figure 6).

Alaska Native tribes with the most (20 or more) subsistence halibut fishers in 2020 included the Central Council of Tlingit and Haida Indians (137 subsistence halibut fishers), the Ketchikan Indian Corporation (100), the Native Village of Tununak (82), the Qagan Toyagungin Tribe of Sand Point (76), the Sitka Tribe of Alaska (48), the Metlakatla Indian Community (36), Pauloff Harbor Village (Sand Point) (35), the Sun'aq Tribe of Kodiak (33), the Hoonah Indian Association (33), the Wrangell Cooperative Association (27), the Native Village of Eyak (Cordova) (25), Agdaagux Tribe of King Cove (20), and the Native Village of Port Graham (20). Of the non-tribal residents of eligible rural communities, the most (more than 100) subsistence fishers lived in Sitka (565), followed by Kodiak (551), Petersburg (343), Haines (225), Cordova (206), Wrangell (187), and Craig (103). Appendix Table D-1 provides details for each tribe and community regarding participation in the subsistence fishery and subsistence halibut harvests in 2020.

As noted above, not every tribal SHARC holder lives in his or her tribe's headquarters community. After assigning tribal members to a community based on their place of residence, an estimate of participation in the subsistence halibut fishery in 2020 by community can be obtained. Appendix tables D-2, D-3, and D-4 provide project findings based on place of residence. The ten communities with the most participants in the subsistence halibut fishery in 2020 were Sitka (611), Kodiak (577), Petersburg (355), Haines (241), Wrangell (227), Cordova (226), Craig (153), Ketchikan (121), Sand Point (108) and Tununak (82) (Figure 7; Appendix Table D-2). Of these ten communities, five had more fishers than in 2018: Petersburg (+8.7%), Haines (+21.9%), Cordova (+5.1%), Sand Point (+19.2%), and Tununak (+11.4%). The estimated number of subsistence halibut fishers in the other five places decreased, from 6% in Sitka to 24% in Ketchikan. Seventeen non-Alaska-resident tribal SHARC holders subsistence fished for halibut in Alaska in 2020, compared to a high of 24 in 2005 and low of zero (0) in 2004 and 2007 (Appendix Table D-2; Fall et al. 2005; 2006; Fall and Koster 2008).

As illustrated in Figure 8[1] (see also Table 5), the largest number of Alaska subsistence halibut fishers in 2020 fished in waters of Regulatory Area 2C (Southeast Alaska)—2,268 (60%).[2] There were 1,129 subsistence halibut fishers (30%) who fished in Regulatory Area 3A (Southcentral Alaska); 171 (5%) in Area 4E (East Bering Sea Coast); 148 (4%) in Regulatory Area 3B (Alaska Peninsula); and 56 (2%) in Regulatory Area 4A (Eastern Aleutians). Additionally, there were 26 (1%) subsistence halibut fishers in the three other regulatory areas (4B, 4C, and 4D). As also shown in Figure 8, the distribution of subsistence fishers by regulatory area in 2020 was similar to that of previous study years. However, trends in the numbers of

1. In reports for study years prior to 2011, the data in figures equivalent to Figure 8 were based on the location of the tribe or place of residence of the SHARC holder. For reports for the 2011, 2012, 2014, 2016, 2018, and 2020 study years, we have revised the figure to report fishers by location in which the fishing took place. Estimates of the number of subsistence halibut fishers fishing within each regulatory area are not available for 2003 or 2004; the data in Figure 8 for those years remain based on the location of the tribe or place of residence of the SHARC holder.
2. Because some SHARC holders fished in more than one regulatory area, the sum of fishers for each area exceeds the state total.

halibut fishers in select areas may be explained as much by non-renewals of SHARCs as by actual fishing practices. From 2008 through 2012, there was a sharp decrease in the estimated number of halibut fishers in Area 4E, but this trend reversed beginning in 2014. As discussed in Fall and Koster (2018:19–22), for the Area 4E communities of Toksook Bay and Tununak these changes were most likely caused by subsistence fishers failing to renew SHARCs plus a new sampling method employed in 2014 and 2016, rather than an increase or decrease in subsistence halibut fishing. The estimated number of subsistence halibut fishers in Area 4C (Pribilof Islands) dropped as well from 105 in 2003 to 9 in 2012 and 12 in 2014, then increasing to 25 in 2016 and 33 in 2018 before decreasing to 16 in 2020. The study finding of no subsistence halibut fishers in Area 4D in 2016 and 2018 is likely a result of non-renewal of SHARCs rather than a lack of fishing effort; in 2020 there were 7 halibut fishers.

Estimated Alaska Subsistence Halibut Harvests in 2020 by SHARC Type and IPHC Regulatory Area

Table 4 reports estimated Alaska subsistence halibut harvests for 2020 by SHARC type and IPHC regulatory area (see also Appendix Table D-1 for detail by tribe and rural community, including subsistence harvests by gear type and confidence intervals). The total estimated subsistence halibut harvest in Alaska in 2020 was 27,241 fish (±3.1%) for 530,757 lb (net weight; ±4.2%).[3] As estimated in pounds net weight, 54.5% of the subsistence halibut harvest (289,380 lb [±4.9%]) was taken by fishers registered with tribes or rural communities in Regulatory Area 2C (Southeast Alaska) (Figure 9; Table 4; Appendix Table D-1). (Note that because some SHARC holders may fish in a regulatory area different from the location of their tribal headquarters or rural community of registration, the area totals in Table 4 do not precisely represent harvest locations. See the section on harvests by location, below.) Fishers from Area 3A (Southcentral Alaska) tribes and rural communities harvested 175,370 lb (±4.8%; 33.0% of the state total). For Regulatory Area 4E (East Bering Sea Coast),[4] the estimated harvest for tribal and rural SHARC holders was 32,209 lb (±35.6%; 6.1% of the net harvest weight). Harvests totaled 15,223 lb (±31.5%; 2.9%) for communities and tribes of Regulatory Area 3B (Alaska Peninsula). For tribal and rural SHARC holders in Area 4A (Eastern Aleutians), the estimated harvest was 11,596 lb (±69.4%; 2.2% of the net harvest weight). For Regulatory Area 4C (Pribilof Islands), the estimated harvest for tribal and rural SHARC holders was 3,750 lb (±0.0%; 0.7% of the net harvest weight). For tribal and rural SHARC holders in Area 4D (Central Bering Sea), the estimated harvest was 2,966 lb (±409.2%; .6%). In Area 4B (Western Aleutians), the estimate for tribal and rural SHARC holders was 263 lb (±0.0%; 0.1%).

The estimated total subsistence harvest of 530,757 lb of halibut in 2020 represents a decrease of 13.8% compared to the estimated harvest of 615,789 lb in 2018 (Figure 10, Figure 17). Harvests by tribal SHARC holders decreased by 24.7% from 229,236 lb in 2018 to 172,656 lb in 2020. Tribal SHARC holders harvested 33% of the Alaska subsistence halibut harvest in 2020, compared to 37% in 2018. Subsistence halibut harvests by nontribal, rural resident SHARC holders decreased by 7.4% from 386,553 lb in 2018 to 358,101 lb in 2020. This group accounted for 67% of the statewide subsistence halibut harvests in 2020, compared to 63% in 2018.

Members of 63 Alaska tribes harvested subsistence halibut in 2020 (Table 4). In 8 others, tribal members obtained SHARCs and returned surveys, but no one fished. Members of 14 other tribes held SHARCS, but no one returned a survey form. No one in the remaining 38 eligible tribes held a valid SHARC in 2020. As shown in Figure 11, members of the 15 tribes with harvests of about 4,000 lb or more accounted for 74%

3. This approximates 707,676 lb round (live or whole) weight. See footnote 4 in Chapter 1 for an explanation of the factor used to convert round weight to net weight.
4. Community Development Quota (CDQ) organizations operating exclusively in areas 4D and 4E may retain U32 halibut (under 32 inches in length) from their commercial catches for home use. In 2020, a total of 2,935 lb net weight of halibut was retained by two organizations: the Bristol Bay Economic Development Corporation (995 lb) and the Norton Sound Economic Development Corporation (1,940 lb) (Erikson and Tran 2021:13). The IPHC includes these fish within the “personal use” removal category, a category that also includes subsistence harvests (Gilroy and Williams 2015). See also the section in Chapter 3, “Comparisons with Nonsubsistence Harvests.”

of the total subsistence halibut harvest by tribal members in 2020 (127,367 lb of a total 172,656 lb; Table 4). These 15 tribes accounted for 66% of eligible tribal members (1,732 of 2,609; Table 3). Members of the other 48 tribes with harvests accounted for about 26% of the total harvest by tribal members (Figure 11).

Residents of 55 eligible rural communities harvested subsistence halibut in 2020 (Table 4).[5] In four other communities, SHARC holders fished but were unsuccessful. In eight others, individuals obtained SHARCs but no one fished. Residents of six other eligible rural communities obtained SHARCs, but no one returned a survey form. No one in the remaining 45 eligible rural communities held a valid SHARC as a nontribal member in 2020.[6] As shown in Figure 12, 8 rural communities with harvests of over 11,000 lb accounted for 80% of the subsistence halibut harvest (287,081 lb of a total 358,101 lb; Table 4) by the holders of rural (nontribal) SHARCs in 2020. Residents of the other 47 eligible rural communities with harvests accounted for 20% of the total harvest by rural SHARC holders.

As also shown in Figure 12, rural SHARC holders from two communities accounted for 43% of the total harvest by this group in 2020: Kodiak (24%) and Sitka (19%). Adding Petersburg, the next highest rural community harvest at 11%, the top three rural communities accounted for 54% of the rural community (nontribal) subsistence halibut harvest in Alaska in 2020.

Estimated Alaska Subsistence Halibut Harvests in 2020 by Harvest Location

Survey respondents were asked to report the "water body, bay, or sound [that they] usually fished" for subsistence halibut in 2020. Multiple responses were permitted. In Table 5, estimated subsistence halibut harvests are reported for the eight Alaska halibut regulatory areas and 19 subdivisions within these areas. It should be noted that regulatory area totals in Table 5 differ slightly from those reported in Table 4 because not all SHARC holders fished within the regulatory area in which their tribal headquarters or residence is located.

Subsistence halibut harvests in Regulatory Area 2C (Southeast Alaska) and Area 3A together accounted for 88% of the Alaska subsistence halibut harvest in 2020 (290,137 lb and 176,993 lb [net weight], respectively; Figure 13; Table 5). These two areas were followed distantly by Area 4E (East Bering Sea Coast) with 33,019 lb (6%). Area 3B (Alaska Peninsula, including the Chignik Area) ranked fourth among regulatory areas with 3% of the Alaska total (13,861 lb), followed by Area 4A (Eastern Aleutian Islands) with 12,118 lb (2%), and Area 4D (Central Bering Sea) with 2,966 lb (1%). Area 4B (Western Aleutian Islands) ranked seventh and added 987 lb (less than 1%), and Area 4C (Pribilof Islands) added another 676 lb (less than 1%).

As shown in figures 14 and 15 and Table 5, the three geographic subareas with the largest subsistence halibut harvests in 2020 were in Area 2C: southern Southeast Alaska (148,961 lb [net weight]; 28% of the state total); the Sitka Local Area Management Plan (LAMP) area (74,087 lb; 14%); and the northern Southeast Alaska area (67,089 lb; 13%).[7] The geographic subareas within Area 3A were the next largest, with waters bordering the Kodiak Island road system (including Chiniak Bay) ranking fourth among subareas and other Kodiak Island waters not along the road system area ("Kodiak Island–Other") ranking fifth (52,830 lb [10%] of the state total and 48,724 lb [9%], respectively). Harvests within Prince William Sound (Area 3A) accounted for 7% of the state total (35,449 lb; ranking sixth). The next largest harvest came from the

5. In this tally, Chiniak, listed separately in tables in this report, is counted as part of Kodiak, as it is for eligibility. Dutch Harbor is counted as part of Unalaska for the same reason. Because some residents of eligible rural areas had mailing addresses in non-eligible communities, two non-eligible communities are listed as "rural communities" in Table 3. These were Juneau (1 SHARC) and Ward Cove (3 SHARCs). These two places are not included in this count of participating rural communities.
6. Note that residents of these communities may have obtained SHARCs as tribal members.
7. For this project, "northern Southeast Alaska" includes those waters of Regulatory Area 2C north of Frederick Sound, including waters surrounding Baranof Island and excluding the Sitka LAMP area. For a description of the Sitka LAMP area, see FR 68 18156, April 15, 2003, § 300.65(d)(1). The remaining waters of Area 2C are referred to as "southern Southeast Alaska" in this report.

Yukon–Kuskokwim Delta area, accounting for most of the Area 4E harvest (31,808 lb; 6%). Subsistence harvests in the remaining subareas of Area 3A ranked eighth (Cook Inlet; 27,931 lb) and tenth (Yakutat; 27,931). The Lower Alaska Peninsula (Area 3B) added 13,016 lb (2.5%) and ranked ninth.

Figure 16 reports estimated harvests in pounds net weight by regulatory area for all study years. Table 6 compares estimated subsistence halibut harvests by regulatory area and geographic subarea in 2020 with those estimated for previous study years, and for the 13-year average from 2003–2012, 2014, 2016, and 2018. As noted previously, for the state overall, the estimated harvest in pounds decreased by about 14% in 2020 from 2018 (Figure 17; Table 6). The estimated harvest in 2020 was overall 41% lower than average for the previous 13 subsistence halibut harvest annual estimates (Figure 18; Table 6).

Estimated subsistence halibut harvests decreased in six of the eight regulatory areas in 2020 compared to 2018 and increased in two (Figure 16; Figure 17; Table 6). As in the previous 13 years of the project, Area 2C (Southeast Alaska) accounted for the most subsistence halibut harvests in 2020 (290,137 lb; 55% of the state total); this harvest represents a decrease of 21% compared to 2018 (Table 6; Figure 16; Figure 17), and a 41% decrease compared to the 13-year average from 2003–2012, 2014, 2016, and 2018 (Figure 18). Harvests in southern Southeast Alaska area were down by 28% compared to 2018 (Table 6). Harvests also decreased in the other two subareas within Area 2C: the remainder of northern Southeast Alaska by 15%, and the Sitka LAMP area by 7%. Harvests in 2020 were substantially lower in all three Southeast subareas compared to recent 13-year averages: 44% in southern Southeast Alaska, 32% in the Sitka LAMP area, and 40% in the remainder of northern Southeast Alaska. The reasons for these changes in Area 2C are likely complex and beyond the scope of this report.[8]

Estimated harvests in Area 3A (Southcentral Alaska) declined for the 11th straight study year (Figure 16). The 2020 harvest of 176,993 lb was a decline of 6% from the 2018 harvest of 187,698 lb (Figure 17; Table 6). The estimated subsistence halibut harvest in Area 3A in 2020 was 43% lower than the previous 13-year average and was the lowest estimate of any study year (Figure 18; Table 6). Area 3A accounted for 33.3% of the statewide subsistence halibut harvest in 2020, more than in the previous three study years, but a drop of about three to five percentage points compared to most other study years between 2005 and 2012 (Table 6). Harvests declined in three of the five subareas of Area 3A from 2018: Yakutat, down 26%; Cook Inlet, down 19%; the waters of Kodiak Island along the road system, down 15%. Harvests increased in Prince William Sound by 14% and in Kodiak Island waters not along the road system (Kodiak Island–other) by 13%. Harvests in 2020 were lower than the previous 13-year averages in all subareas of Area 3A.

In Area 3B (Alaska Peninsula), harvests decreased from 16,644 lb in 2018 to 13,861 lb in 2020 (down 17%) (Figure 16; Figure 17; Table 6). The 2020 estimated harvest was the second lowest of the 14 years of the project, 52% below the previous 13-year average, and notably below the estimates for 2005 (46,225 lb), 2006 (48,547 lb), and 2007 (47,748 lb) (Table 6; Figure 16; Figure 18). Earlier reports (e.g., Fall and Koster [2012:12]) suggested that improved participation in the SHARC program in 2005–2008 accounted for some of the increase in the estimated harvests in Area 3B in those years, compared to 2003 and 2004, the first two years of the harvest monitoring program. The number of SHARC holders for Area 3B tribes and rural communities steadily decreased from 606 in 2008 to 298 in 2014, which may partially explain the lower harvest estimates for 2009–2012 and 2014 (see discussion of Sand Point in Fall and Lemons [2016:19–20]; Table 6). However, the increase in SHARC enrollment for this area in 2016 to 441, to 354 in 2018, and to 420 in 2020 did not result in a corresponding increase in the estimated subsistence halibut harvest.

Estimated subsistence halibut harvests in Area 4A (Eastern Aleutians) decreased 8% from 2018 (13,237 lb) to 2020 (12,118 lb) (Figure 17; Table 6). The harvest in Area 4A in 2020 was 36% lower than the previous 13-year average (Figure 18). There are only three communities in Area 4A: Akutan, Nikolski, and Unalaska/Dutch Harbor. Therefore, harvest estimates for individual communities strongly shape the area estimate. For example, previous reports have discussed how sampling achievement in Akutan evidently affected the area's harvest estimate (Fall and Koster 2010:13). No Akutan residents returned SHARC surveys for 2012

8. Further discussion of differences between harvest estimates for the 14 study years appears in Fall and Koster (2014).

or 2014. As discussed in Fall and Koster (2018:3–4), for the 2016 study year, staff traveled to Akutan and surveyed five of the six SHARC holders living in the community; the estimated harvest was 910 lb. SHARC enrollments increased to 50 in 2020 after this staff visit, with a corresponding increase in the estimated harvest to 6,251 lb. In Unalaska/Dutch Harbor, the increased harvest from 2008 to 2009 accounted for most of the change in the regulatory area's estimate between those two years, but estimated harvests in that community declined steadily through 2014 (Table 13). For the 2016 study year, staff surveyed resident SHARC holders in Unalaska/Dutch Harbor; of 142 SHARC holders, surveys were obtained for 96, resulting in an estimated subsistence halibut harvest of 7,776 lb, the lowest of any study year. In 2018, there were 121 SHARC holders living in Unalaska/Dutch Harbor; the estimated subsistence harvest of halibut was 9,199 lb. In 2020, 110 SHARC holders harvested an estimated 5,330 lb (Appendix Table D-2).

In Area 4B (Western Aleutians), the estimated harvest of 987 lb was a decrease of 41% from the estimate of 1,684 lb in 2018 (Table 6; Figure 16; Figure 17). Estimated harvests in this area dropped after 2008, when the estimate of 4,737 lb was 147% higher than the previous five-year average (Fall and Koster 2010:92). This increase in 2008 was likely due in part to the larger reported average size of halibut harvested in this area in that year (30.5 lb [net weight] per fish; see Table 9 in Fall and Koster [2010:66]) compared to earlier years (19.5 lb [net weight] per fish in 2007 [Fall and Koster 2008:71]). The estimated harvest for Area 4B in 2020 was 37% below the previous 13-year average (Figure 18; Table 6). Notably, no members of the Atka Tribe (the only eligible tribe in Area 4B) returned surveys for 2016, 2018, or 2020.

The 2020 estimated subsistence harvests of halibut in Area 4C (Pribilof Islands, 676 lb) decreased by 87% from 5,152 lb in 2018 (Figure 16; Figure 17; Table 6). The 2020 estimate was 91% below the previous 13-year average and the lowest since the SHARC program began in 2003 (Figure 18; Table 6). As noted in reports for previous project years (Fall et al. 2005:15; Fall and Koster 2008:15), a high response rate to the survey, based on follow-up household surveys and inseason data collection by the Central Bering Sea Fishermen's Association, likely produced very reliable harvest estimates for St. Paul, the largest community in Area 4C, after the first project year of 2003. However, due to funding reductions, this work has not taken place since 2008. The number of valid SHARCs held by St. Paul residents dropped from 246 in 2007 to an average of 43 for 2008–2011 and just 12 in 2012, but then increased slightly to 27 in 2014, 30 in 2016, 36 in 2018 and 32 in 2020. The response rate to the survey declined from 83% in 2007 to 10% in 2020. The estimated number of subsistence halibut fishers in the community was 12 in 2020, compared to 28 in 2018. In 2020, no one living in St. George, the only other community in Area 4C, held a SHARC. The extent to which the decline in SHARC enrollment or the survey response rate has affected harvest estimates for Area 4C is uncertain.

In Area 4D (Central Bering Sea), the estimated harvest of halibut was 2,966 lb; in 2016 and 2018, no returned surveys reported subsistence halibut harvests, resulting in harvest estimates of zero (Table 6). The subsistence halibut harvest estimates have fluctuated through time with an average of 6,530 lb from 2003-2007, declining to an average of 1,247 lb from 2008–2012 and an average of 18 lb from 2014, 2016, and 2018 until the harvest of 2,966 lb in 2020. It is likely that the sharp drop in the harvest estimate for Area 4D since 2008 is the result of nonrenewal of SHARCs by subsistence fishers. The number of SHARCs held by residents of Savoonga on St. Lawrence Island, the principal halibut harvesting community in Area 4D, dropped from 43 in 2007, with an estimated 15 subsistence halibut fishers, to 17 SHARC holders in 2009, with an estimated 7 subsistence halibut fishers, 17 SHARC holders in 2010 with 6 fishers, 17 SHARC holders and 9 fishers in 2011, 6 SHARC holders and 5 fishers in 2012, 6 SHARC holders and 1 fisher in 2014, 1 SHARC holder and no fishers in 2016 and 2018. In 2020, there were 12 SHARC holders and 7 fishers.

For Area 4E (East Bering Sea Coast), the estimated subsistence halibut harvest of 33,019 lb in 2020 was a 31% increase from the 25,160 lb estimated for 2018 and was 4% lower than the 13-year average from 2003–2012, 2014, 2016, and 2018 (Figure 16; Figure 17; Figure 18; Table 6). Estimated harvests in each study year since 2014 were substantially higher than the estimates for 2008 through 2012. The report for 2012 (Fall and Koster 2014:13–14) suggested that the drop in SHARC renewals and survey response rates from 2008 through 2012 accounted for a likely large underestimate of subsistence halibut harvests in Area

4E. SHARC registrations dropped from 1,191 in 2007 to 421 in 2008, 374 in 2009, 286 in 2010, 291 in 2011, and 185 in 2012. Also, unlike 2003–2007, no outreach, face-to-face interviewing, or telephone calls took place in Area 4E communities in 2008–2012, resulting in lower response rates compared to previous years. As discussed in Fall and Koster (2018:4–5), outreach and interviewing of likely subsistence halibut fishers who did not hold SHARCs took place in Toksook Bay and Tununak for 2014 and 2016. Thus, the harvest estimates for Area 4E for those 2 years are based on a far more complete sample of halibut fishers than was achieved for 2008 through 2012. In 2018 and 2020, outreach and interviewing did not occur in Toksook Bay; it occurred instead in Tununak during both years and in Hooper Bay (in 2018) and Nightmute (2020). In the past, Toksook Bay has accounted for a large percentage of the halibut harvest in Area 4E. As a result of the outreach that took place in the community for the 2014 and 2016 harvest years, 55 Toksook Bay residents held SHARCs for 2018, but this number decreased to 38 for 2020. Only six (16%) surveys were returned through the mail survey (Table 3). The lack of outreach in Toksook Bay and the low response rate may have resulted in an incomplete harvest estimate for the area for 2020.

Figure 19 illustrates the average subsistence halibut harvest in pounds net weight for those SHARC holders who subsistence fished in 2020. Figure 20 illustrates the average harvest per fisher in numbers of halibut. For the state overall, the average subsistence halibut fisher harvested 141 lb net weight (compared to 150 lb in 2018 and 165 lb in 2016) or about 7.2 halibut in 2020, the lowest average harvest of fish, in numbers of fish or in pounds, of any study year. Average harvests per fisher at the regulatory area level ranged from 42 lb (net weight; 2.2 halibut) in Area 4C to 424 lb (18.9 halibut) in Area 4D (Figure 19). Average subsistence halibut harvests over the study years have ranged from 7.3 halibut per fisher in 2018 to 9.9 halibut per fisher in 2005, and from 148 lb per fisher in 2011 to 211 lb per fisher in 2003 (Fall and Koster [2012:14, 2013:14]; see also Table 15).

Subsistence Halibut Harvests by Place of Residence

As shown in Figure 21, there were 22 Alaska communities whose residents had combined estimated subsistence halibut harvests of approximately 4,000 lb or more (net weight) in 2020. In this figure, community totals include harvests of all SHARC holders living in the community, regardless of type of SHARC (tribal or rural) or tribal affiliation.[9] Residents of these communities accounted for 86% of the total Alaska subsistence halibut harvest in 2020. Residents of Kodiak (Kodiak includes the city of Kodiak and other portions of the Kodiak Island Borough connected to it by roads) ranked first with 16.9% of the total Alaska harvest (89,827 lb of a total 530,757 lb), and Sitka ranked second with about 13.7% (72,671 lb). With 12,482 and 8,458 residents, respectively, these two communities included about 24.4% of the population of rural communities eligible to participate in the subsistence fishery. There were 86 other Alaska communities with at least one resident who participated in the subsistence halibut fishery in 2020 (Appendix Table D-2). The total harvest for these other communities represented about 14% (74,637 lb) of the state total.

For 2020, 63 SHARC holders provided out-of-state addresses from 53 communities in 25 states, provinces, and territories.[10] Seventeen non-Alaska-resident SHARC holders subsistence fished for halibut in 2020, with a harvest of 117 fish and 1,823 lb (0.3% of the state total) (Appendix Table D-2). This level of involvement by non-Alaska residents in the subsistence halibut fishery in 2020 is similar to that of other study years (Fall and Koster 2012:14).

Subsistence Harvests by Gear Type

Table 5 and Figure 22 report the estimated subsistence harvests of halibut in Alaska in 2020 by gear type and regulatory area fished. In total, 396,238 lb (75%) of halibut (net weight) were harvested using setline (stationary) gear (i.e., longlines, or "skates," sometimes set with a power winch attached to a vessel), and 134,520 lb (25%) were harvested using hand-operated gear (i.e., handlines or lines attached to a rod or pole).

9. Note that nonrural places, such as Juneau and Ketchikan appear in Figure 21 and in appendix tables D-2, D-3, and D-4 because members of eligible Alaska Native tribes may participate in the fishery regardless of where they live, and because some eligible residents of rural areas have mailing addresses in nonrural places.
10. Note that members of eligible tribes may obtain SHARCs regardless of their place of residence.

As in past years, there were notable differences between regulatory areas (Table 5; Figure 22). Harvests using setline gear predominated in Area 2C (Southeast Alaska; 84% of the area's total subsistence harvest), 3A (Southcentral Alaska; 75%), 3B (Alaska Peninsula; 58%); 4B (Western Aleutian Islands; 100%); 4C (Pribilof Islands; 92%); and 4D (Central Bering Sea; 63%). In area 4A (Eastern Aleutian Islands) 52% of the subsistence halibut harvest was taken with handlines. As in past years, most halibut in Area 4E (East Bering Sea Coast; 94%) were harvested with handlines.

Number of Hooks Fished with Setline Gear

Respondents who fished with setline (stationary) gear (longline or skate) were asked to report how many hooks they "usually set" in 2020. The findings by regulatory area are reported in Table 7. For the fishery overall, most setline fishers (43%) used 30 hooks, the maximum number allowed by regulation in areas 2C, 3A, 3B, 4A, and 4B (there is no hook limit in areas 4C, 4D, and 4E; fishers using more than 30 hooks are included in the 30-hook total) (Figure 23). The next most frequently reported number was 20 hooks, used by 14% of the fishers who used setline gear. Fifteen hooks (14%) ranked third, followed by 25 hooks (8%), 28 hooks (5%), and 10 hooks (3%). This pattern is similar to that of all previous study years (Fall and Koster 2014:14–15).

Thirty was the most frequently used number of hooks with setline gear in the eight regulatory areas in which survey respondents reported subsistence fishing (Table 7): 2C (Southeast Alaska), 40%; 3A (Southcentral Alaska), 50%; 3B (Alaska Peninsula), 46%; 4A (Eastern Aleutian Islands), 55%; 4B (Western Aleutian Islands), 67%; 4C (Pribilof Islands), 100%; 4D (Central Bering Sea), 100%; and 4E (East Bering Sea Coast), 42%.

Number of Subsistence Halibut Fishing Trips

For 2020, for the eighth time in the harvest survey program, respondents were asked to report the number of subsistence fishing trips they took for halibut in the study year. The average number of trips for subsistence halibut fishers was 3.9, similar to other study years (Figure 24; Fall and Koster 2013:15), with those holding tribal SHARCs averaging 4.3 trips and those holding rural SHARCs averaging 3.7 trips. In one-half the regulatory areas, the average subsistence fisher took between three and four trips, with higher averages in Area 4D (average of 9.0 trips), Area 4E (6.4 trips), and Area 4A (5 trips) (Figure 24). In Area 4C, the average subsistence fisher took 2 trips in 2020. As shown in Figure 25, about 80% of fishers took 5 or fewer trips, and about 15% took between 6 and 10 trips. About 4% took between 11 and 20 trips, and about 1% took more than 20 trips.

The average number of subsistence halibut harvested per fishing trip in 2020 was 1.9 (comparable to estimates since 2009), with tribal SHARC holders averaging 2.1 fish and rural SHARC holders averaging 1.8 fish (Figure 26). The highest average harvests per trip for all SHARC holders occurred in Area 4C (5.2 fish per trip) and Area 3A (2.3 halibut per trip).

Sport Harvests of Halibut by SHARC Holders

Survey respondents were asked to report the number of halibut and pounds of halibut they harvested "while sport fishing during 2020." They were instructed not to include fish they considered sport caught as part of their subsistence halibut harvest.[11] The goal of this question was to avoid double counting harvested halibut

11. The ADF&G postal survey did not investigate the criteria by which survey respondents classified their rod and reel (hook and line attached to a rod or pole) halibut harvests as subsistence or sport. However, a supplemental mailing to 1,098 SHARC holders from Kodiak and Sitka who fished for halibut in 2004 asked respondents to provide reasons for classifying their halibut harvests as sport or subsistence. For a discussion of the findings, see Fall et al. (2006:19–20, 123–138). In short, the primary factor (for 69% of respondents) was the gear used to harvest the fish: respondents viewed rod and reel as "sport gear" and setline gear as "subsistence gear." Another factor, reported by 12%, concerned the composition of the fishing group. If the SHARC holders had fished with relatives or friends who did not possess a SHARC, they classified their fishing as recreational. Harvest amounts were also a consideration: harvests of one or two halibut with a rod and reel were considered "sport" by some respondents,

in this survey and in the statewide survey of sport fishers administered by the Division of Sport Fish of ADF&G. Answering this question required respondents to classify their hand-operated gear (i.e., hook and line and rod and reel) harvests as either subsistence or sport; these gear types are legal gear for both sport fishing and subsistence fishing. Fish reported in the survey as "sport harvests" are not included in the estimated subsistence harvests discussed above. If SHARC holders also received the sport fish survey for 2020, they would be expected to report only their sport-caught halibut and not include any halibut they reported as subsistence harvests, even if taken with rod and reel or handheld line with two or fewer hooks. Note that the project findings do not represent the total recreational halibut harvest by residents of eligible communities and tribes in 2020 because individuals from these tribes and communities who did not obtain SHARCs could have sport fished.

As shown in Table 4 and Table 5, the estimated total sport halibut harvest by holders of SHARCs in 2020 was 6,838 fish or 124,090 lb (net weight) (compared to 27,241 fish or 530,757 lb in the subsistence fishery). By area fished, most of the sport halibut harvest by SHARC holders occurred in Area 2C (Southeast Alaska) (67,466 lb; 54%) and Area 3A (Southcentral Alaska) (52,642 lb; 42%) (Table 5). In total, an estimated 1,876 SHARC holders (23%) reported that they sport fished for halibut in 2020 (Table 5). A large proportion of these fishers fished in either Area 2C (1,173; 63%) or Area 3A (643; 34%) (Table 5).

Estimated Average Net Weights of Subsistence- and Sport-Caught Halibut

Table 8 reports the average net weight of subsistence- and sport-caught halibut by SHARC holders in 2020, based upon estimates provided by survey respondents. For the state, the estimated average net weight of subsistence-caught halibut was 19.5 lb, and the average net weight of sport-harvested halibut by SHARC holders was 18.1 lb. For all halibut reported as harvested by SHARC holders in 2020, the average net weight per harvested halibut was 19.2 lb. Between regulatory areas, there was a range of average weights per halibut. Halibut harvested in the subsistence fishery in Areas 4D (26.5 lb per fish), 4A (25.8 lb), and 2C (21.4 lb) were larger than the state average. In Area 4E, halibut harvested in the subsistence fishery averaged 14.4 lb, 74% of the statewide average subsistence-harvested halibut.

The average weight of halibut harvested in the Alaska subsistence fishery declined steadily over the first six years of this project, from 23.7 lb per fish in 2003 to 18.2 lb per fish in 2008. This decline leveled off in 2009 when the average subsistence-harvested halibut weighed 19.0 lb, then 18.4 lb per fish in 2010, 18.3 lb per halibut in 2011, 18.5 lb in 2012, and 18.7 lb in 2014 (Fall and Koster 2014:16; Fall and Lemons 2016:17). The average of 19.8 lb per fish in 2016, 20.6 lb in 2018 and 19.5 lb in 2020 may be an indication of an increase in weight at age of halibut in Alaska.

Assessment of Needs Met for Halibut in 2020

As noted in Chapter 1, for the 2020 study year, a question was continued from the 2018 study year asking if each respondent's household got all the halibut it needed during the study year, and if the answer was no, following up with reasons why. Responses to this second question were open ended and were coded by topic for analysis. The discussion that follows is based on a preliminary analysis of responses to these questions; additional analysis and follow-up research is recommended (see Recommendations in Chapter 4).

As shown in Table 9 (see also Figure 27), 56% of respondents who held SHARCs as residents of rural communities said their needs were met, including the majority in Area 2C (54%), 3A (64%), and 4D (100%). The pattern was different for respondents who held SHARCs as members of eligible tribes: just 35% said their needs were met, including 31% in Area 2C and 41% in Area 3A; no responses were provided by tribal SHARC holders in Area 4D. Of all respondents, 51% said their needs were met and 49% said they were not.

Tables 10, 11, and 12 report reasons respondents offered for why halibut needs were not met (note that respondents could offer multiple reasons.) As also shown in Figure 28, the most common responses for

but if they harvested more than two fish with rod and reel in one day, they classified the harvest as subsistence. Finally, about 19% of the respondents gave reasons related to the uses of the fish or other cultural and lifestyle explanations.

tribal SHARC holders, rural SHARC holders, and all respondents combined included lack of effort (with no further explanation offered about why), lack of equipment (usually boats and/or motors), and family/personal reasons (such as illness). COVID-19, an unexplained unsuccessful harvest (e.g. “no luck”), weather, and no time to fish (primarily due to work obligations) were other common explanations. Fewer respondents cited resource availability, regulations, or competition with other user groups. The large number of general “lack of effort” responses leaves uncertain any connections to more specific reasons that were cited by other respondents, such as COVID-19, time constraints, inoperative equipment, fuel costs, resource scarcity, or competition, among others.

3. DISCUSSION

A Note on the 2020 Harvest Year

Before beginning a discussion of the 2020 study year, it is important to note at the outset the unusual circumstances of the year. In March of 2020, COVID-19 was declared as a global pandemic. Governor Dunleavy issued a health mandate on March 27, 2020 requiring most individuals to remain at their place of residence and practice social distancing.[1] At the time, there were many unknowns and rapidly changing information about the novel disease, its effects, and what activities and behaviors were safe to engage in. The effect of COVID-19 on harvesting activities is unknown at this time. As was seen above, slightly more than 10% of survey respondents gave the pandemic as a reason their subsistence halibut needs were not met. In other studies, 20%–30% of households felt that COVID-19 negatively impacted their harvests of subsistence resources (Sill and Cunningham 2021). The effect of the pandemic on subsistence halibut fisheries is made more complicated because halibut can be fished nearly year-round, unlike some subsistence resources such as salmon or herring eggs. Public health guidance and people's perceptions of "safe" activities changed throughout 2020, which could have led to changed harvesting practices if not a change in the amounts harvested.

Comparisons With Other Harvest Estimates

As discussed in the first report for the SHARC survey project (Fall et al. 2004:19–22), comparing the statewide subsistence halibut harvest estimates generated by the SHARC survey with subsistence halibut harvest estimates from projects conducted before 2003 is difficult. The primary reason, as noted in Chapter 1, is that the regulations that allow subsistence halibut fishing in Alaska waters using traditional gear, such as longlines with more than two hooks, and that removed the restrictive daily harvest limit of two fish, have only been in place since May 2003. Methodological differences also create challenges for comparison. For example, comprehensive community harvest surveys attempt to estimate halibut harvests for home use by all residents conducted under sport fishing rules and harvests removed from commercial fisheries for home use, as well as those taken under subsistence regulations. The statewide subsistence halibut harvest estimates from the SHARC postal survey from 2003 through 2020 include only those subsistence harvests by individuals who obtained SHARCs.

The report for the first year of this project discussed previous efforts to estimate subsistence halibut harvests at the regional and statewide levels. The report concluded that the 2003 SHARC survey estimates were not markedly different from estimates based on Division of Subsistence household survey data as reported in the CSIS.[2] We will not repeat that full discussion here.[3] However, the report also concluded that because of the limitations associated with the previous subsistence harvest estimates at the statewide level, until

1. Alaska Department of Health and Social Services, "COVID-19 Health Mandate 11," March 27, 2020. Accessed October 6, 2021. https://content.govdelivery.com/accounts/AKDHSS/bulletins/283a713
2. Alaska Department of Fish and Game "Community Subsistence Information System" https://www.adfg.alaska.gov/sb/CSIS/. Hereinafter cited as CSIS.
3. For example for 2000, the IPHC estimated 439,000 lb net weight for Alaska "personal use" (noncommercial, nonrecreational) harvests (Wolfe 2001). The IPHC estimate is based upon a methodology described by Trumble (n.d.). The IPHC method assumed that 50% of Alaska Native rod and reel halibut harvests, as reported in ADF&G household surveys, are "sport" and 50% "personal use," and that 75% of the non-Native rod and reel harvests are "sport" and 25% "personal use" (Trumble n.d.:62). No justification for these assumptions is provided and changing these sport-to-personal-use ratios can result in a very different estimate for the "personal use" halibut harvest. In a report to the Alaska Board of Fisheries in May 2001, using the same data source as the IPHC, Wolfe (2001) estimated that the subsistence halibut harvest in Alaska "probably ranges between 400,000 and 1,000,000 pounds (round weight) annually," based on harvest data in the CSIS/CPDB. This is an estimated harvest of 300,000 to 750,000 lb net weight. See Fall et al. (2004:19–21) for discussion of Wolfe's methods. In the original analysis for the subsistence halibut program, the NPFMC estimated the Alaska subsistence halibut harvest at 1.5

a time series was developed based upon the SHARC survey results, a discussion of harvest trends in the subsistence halibut fishery was speculative. After 10 years of data for the subsistence halibut fishery were available, a comparison of the project findings across study years appeared in the final report for 2012 (Fall and Koster 2014:31–35).

Community Case Studies

Previous overviews of annual subsistence halibut harvests discussed findings for eleven communities to represent communities of similar size and location. Data for these eleven communities are updated in Table 13 and data for the community of Nightmute has been added. In this report, discussion is limited to two communities in which household surveys included halibut fishers who were not enrolled in the SHARC program for 2020, Tununak and Nightmute, as well as updated findings for Toksook Bay (although interviewing did not occur for 2020 in that community). Data for Nightmute were added to Table 13 because trends for this community had not been discussed in previous reports. Appendix tables D-2, D-3, and D-4 report project results for 2020 for all communities, based upon the residence of SHARC holders.

Toksook Bay (Regulatory Area 4E)

The population of Toksook has increased since the 2000 census, but the number of valid SHARCs held by Toksook residents has decreased from a high of 533 in 2007 to a low of 7 in 2012 and 2014. The number of SHARCs increased to 55 in 2018, largely due to Division of Subsistence outreach efforts (Fall and Koster 2018:4–5), before declining again to 38 in 2020. The Division of Subsistence has not conducted a household harvest survey in this community. Wolfe (2002) estimated a subsistence halibut harvest of 12,600 lb net weight for Toksook Bay for 2000, based upon a 1986 per capita estimate for the neighboring community of Tununak.

The Division of Subsistence collaborated with the Toksook Bay tribal government to survey most of the community's halibut fishers during project years 2003–2007; project staff consider the reported harvests during these years to be reliable. From 2008–2012, no outreach or interviewing occurred in Toksook Bay. The number of valid SHARCs held in the community during this time declined as did the harvest estimates. Based on the survey returns during these years, it is likely that many active halibut fishers in the community did not renew their SHARCs and therefore were not part of the SHARC survey, resulting in underestimates of participation in the fishery and in estimated harvests. The final report for 2012 concluded that "without renewed registrations in the SHARC program and outreach in the community, it is unlikely that a mail survey alone will provide reliable harvest estimates for the subsistence halibut fishery in Toksook Bay in the future" (Fall and Koster 2014:28). Therefore for 2014 and 2016, division staff traveled to Toksook Bay and, with the assistance of the tribal government and key respondents, identified all potential subsistence halibut fishers in the community, most of whom did not hold SHARCs. The estimated subsistence harvests and number of fishers were similar to findings during earlier project years (2003–2007) when outreach and interviewing occurred. These findings confirm that harvest estimates from 2008 through 2012 based on SHARC registrations alone significantly underestimated halibut harvests in the community.

As noted in Fall and Koster (2020) and in Chapter 1, the tribal government in Toksook declined to participate in this project for 2018 and were unable to approve the project in time for the 2020 study. Therefore, harvest estimates for the community in both years are based solely on the response to the mailed survey; response rates were low in both years (20% in 2018 and 16% for 2020). The number of SHARCs, estimated number of fishers, and estimated harvests all declined in Toksook Bay from 2018 to 2020. Based on comparisons with other study years for which high rates of participation in the survey were achieved (such as 2014 and 2016), it is likely that the subsistence halibut harvest estimate for Toksook Bay for 2020 is an underestimate of the actual harvest.

Fishers in Toksook Bay, as well as Tununak, often reported more difficulty catching halibut in 2016 compared to other recent years because Pacific cod were more abundant while halibut were less so; indeed,

million pounds net weight (68 FR 18145, April 15, 2003, EA/RIR; North Pacific Fishery Management Council [2003]).

some respondents reported that they had not fished for halibut in 2016 because others had experienced little to no success. In both Toksook Bay and Tununak, respondents for 2016 cited bycatch of halibut in Bering Sea commercial groundfish fisheries as the ongoing primary cause of scarce halibut. A prominent elder in Toksook Bay described finding halibut floating in the water, dead—he assumed from prior capture in commercial groundfish fisheries in Kuskokwim Bay. No updated information is available concerning fishers' challenges in catching halibut during the last two study years,

With respect to the lack of renewals of SHARCs, a likely primary cause is a general lack of conviction that harvest data are important; additional outreach is necessary to explain the role of harvest data in fishery management and allocations. Further, internet access for renewals is extremely challenging for most households in these communities. Enrollment, and participation in annual harvest monitoring, would likely improve if the communities were responsible for providing paper copies of SHARC applications and collecting the harvest information. Maintaining confidentiality and anonymity for harvest data is also essential for achieving participation in harvest monitoring programs in these communities.

Tununak (Regulatory Area 4E)

Tununak had a population of 327 in 2010, with 314 Alaska Natives; the population estimate was 411 in 2020 (Table 1). The Division of Subsistence conducted a comprehensive household harvest survey in Tununak in 1986, which provides the only estimate of subsistence halibut harvests for the community prior to the adoption of the 2003 subsistence regulations. The harvest estimate for 1986 was 1,532 fish and 30,643 lb (net [dressed] weight), with a 95% confidence limit of ±26%. The harvest per capita was 93 lb (net weight) (CSIS).

There is no subsistence halibut harvest estimate for Tununak for 2003 because of a lack of participation in the program. From 2004 through 2020, residents of Tununak have held SHARCs and participated in the harvest survey. Similar to Toksook Bay, in years where Division staff worked with the tribal government to identify and survey likely halibut fishers (2005, 2007, 2014–2020), estimated number of fishers and reported or estimated harvests were higher than in years with no outreach or interviewing. Due to the limited participation in the SHARC program over 2008–2012 years, and based on results from 2004–2007, it is unlikely that study results in these years provide a reliable estimate of subsistence halibut harvests in the community.

Compared to the results of the 1986 survey, the harvest estimates for Tununak for 2004 through 2012 appear low. The low response to the mailed SHARC surveys plus a lack of outreach or follow-up interviews likely resulted in a large underestimation of the harvests. The final report for 2012 concluded that "several additional years of harvest data collection plus renewed outreach and community support will be necessary to adequately document subsistence halibut harvest trends in Tununak" (Fall and Koster 2014:29). For the 2014 through 2018 study years, division researchers traveled to Tununak and, with the assistance of key respondents and local research assistants, identified potential subsistence halibut fishers each year, most of whom did not hold SHARCs in 2014 or 2016. By 2018, outreach efforts had increased enrollment in the SHARC program to 55 residents. The estimated subsistence halibut harvest that year was 27,951 lb, far exceeding any other estimate since 2003 (the previous high was 7,015 lb in 2007) and approaching the 30,643 lb harvest based on household surveys for 1986 (Table 13; CSIS).

Division staff again coordinated with the Tununak IRA to conduct additional outreach and interviews in Tununak for the 2020 study year. Because of the COVID-19 pandemic, staff were unable to travel to the community and had to rely on phone communication to hire and train local research assistants to conduct the surveys. Likely as a result of previous years of outreach efforts, there were 69 SHARC holders in Tununak in 2020 and a total of 98 potential halibut fishers. Twenty-nine SHARC holders returned their survey through the mail, and 10 additional interviews were completed by LRAs in the community or division staff for a response rate of 40%. This was the lowest response rate during a year with additional outreach and surveying, highlighting the difficulties the pandemic has created for field research. The total estimated subsistence harvest of halibut was 21,094 lb, which was the second highest harvest estimated in

Tununak through this project. These results suggest that subsistence halibut harvests in Tununak have been substantially underestimated since the SHARC program began in 2003.

Nightmute (Area 4E)

Nightmute had a population of 280 in 2010, including 266 Alaska Natives. The estimated population in 2020 was 306 (Table 1). In 2003, the first year in which subsistence halibut fishing took place under the current regulations, 29 residents of Nightmute obtained SHARCs, but the total declined to eight in 2008 when the initial enrollments expired. The number of SHARC holders in the community fell to zero in 2012 and remained so through 2020 (Table 13). Prior to 2003, very little information about halibut harvesting in Nightmute, either harvest data or ethnographic data, exist. In the early 1980s, Mary Pete investigated participation and characteristics of the herring fisheries of Nelson Island. As part of that discussion, she noted that most of the commercial permits in the community were for halibut, and that subsistence and commercial halibut fishing occur in the waters around Nelson Island. Halibut jigging occurred concurrently with sea mammal hunting trips or local herring fishing.

As discussed in Chapter 1, division staff worked with the Nightmute TC during the spring of 2021 to conduct additional outreach and harvest surveys in the community. Due to COVID-19, division staff did not travel to Nightmute, but coordinated LRA activities over the telephone. With the help of local research assistants, 27 potential halibut fishers were identified, and all were interviewed. The estimated subsistence harvest was 7,669 lb by 27 fishers. The highest estimated harvest for the community was 6,634 lb in 2003, when 29 SHARCs were held by Nightmute residents, and an estimated 18 residents fished for halibut. The lowest estimate was 126 lb in 2009 by one resident, when only 10 SHARCs were held by community residents. Because there were no SHARC holders in the community for 2012, 2014, 2016, or 2018 there are no harvest estimates for those years (Table 13).

Comparisons With Nonsubsistence Removals In 2020

As reported in Table 14, the preliminary estimated total halibut removal in Alaskan waters in 2020 was 27,093,234 lb (net weight) based on data compiled by the IPHC (Erikson and Tran 2021) and this project. In this total, the removal of 2,935 lb of U32 (under 32 inches in length) halibut for personal use by Community Development Quota (CDQ) organizations in Area 4D and Area 4E has been added to the subsistence harvest category. Commercial harvests accounted for 58.8% of halibut removals in Alaska in 2020 (Figure 29). Sport fisheries (harvests and other mortalities) ranked second, with 18.6%. Bycatch mortality of halibut in various other commercial fisheries ranked third, with 16% of the statewide removals. IPHC research accounted for 2.6% and non-harvest discard mortalities (formerly called “wastage”) in the commercial halibut fishery added 2.0% to the total halibut removals. The subsistence fishery accounted for 2.0% of the total removals of halibut in Alaska waters in 2020.

Halibut harvests by fishery in 2020 at the regulatory area level did not differ substantially from the statewide pattern (Table 14; Figure 30). In all regulatory areas, commercial harvests accounted for 54% or more of the total pounds net weight of halibut removals. In Regulatory Area 2C (Southeast Alaska) and Area 3A (Southcentral Alaska), sport fisheries took 30.8% and 27.7%, respectively, of the halibut harvest in 2020; however, sport fisheries were just 0.4% of the total harvest in Area 3B (compared to 0.5% for the subsistence harvest) and in Area 4 just 0.2%, compared to subsistence harvests of 0.8%. Commercial bycatch accounted for 41.9% of halibut removals in Area 4. As a percentage of the total removal, subsistence halibut harvests were largest in Area 2C at 5.2% of the total (although they were about 17% of the sport harvest and 9% of the commercial harvest) and in Area 3A at 1.5%.

4. CONCLUSIONS AND RECOMMENDATIONS

Summary And Conclusions

New federal regulations governing subsistence halibut fishing in Alaska went into effect in May 2003. The 2020 calendar year was the 14th for which a program was implemented to estimate the subsistence harvest of halibut under these regulations. Based upon survey return rates, the program was a success. Of 8,078 potential halibut fishers, 5,127 (63%) voluntarily provided information about their subsistence halibut fishing activities in 2020 by responding to the mail survey or agreeing to be interviewed. This was the fourth-highest response rate for the program, which has ranged from 58% in 2007 to 71% in 2012 (Table 15).

In 2020, the number of potential subsistence halibut fishers (8,135) dropped 5% from 2018 and was 30% lower than the 13-year average from 2003–2012, 2014, 2016, and 2018 (Table 15). The 2020 total includes potential subsistence fishers in two communities who did not hold SHARCS; there were 8,078 valid SHARCs in 2020, a 5% decline from 2018 (8,489 SHARCs). See Fall and Koster (2014:33–35) for a discussion of SHARC renewal patterns for 2003–2012.

Based on the survey returns, an estimated 3,777 individuals participated in the Alaska subsistence halibut fishery in 2020. This is an 8% decrease from 2018 and is 26% lower than the 13-year average from 2003–2012, 2014, 2016, and 2018. However, 46% of potential halibut fishers participated in the fishery in 2020, the third-highest percentage of any study year (49% participated in 2016, 48% in 2018). The estimated subsistence harvest of halibut in Alaska in 2020 was 27,241 fish or 530,757 lb, 14% lower than 2018. As estimated in pounds, the 2020 subsistence halibut harvest was the lowest of any study year and 41% lower than the 13-year average from 2003–2012, 2014, 2016, and 2018 (Table 15). The total estimated harvests for all study years since 2003 are below the 1.5 million net pounds estimated for the Alaska subsistence halibut harvest when the current regulations were developed by the North Pacific Fishery Management Council (see https://www.federalregister.gov/documents/2003/04/15/03-8822/pacific-halibut-fisheries-subsistence-fishing#p-1; NPFMC 2003). Throughout the project study years, trends in the estimated subsistence halibut harvests have generally mirrored trends in the number of individuals who have held SHARCs, although in several years estimated harvests declined despite an increase in the number of SHARC holders. The importance of outreach and interviewing, especially in key fishing communities in Area 4E are clear; the higher harvests in 2014 and 2016 and the lower harvests in 2018 and 2020 were in part a result of the presence or absence of these outreach efforts.

Average harvests per fisher in the subsistence halibut fishery in 2020 at 7.2 fish and 141 lb declined slightly from the 7.3 fish and 150 lb estimated for 2018. The average harvest per fisher in pounds was 20% below the average of the previous 13 annual estimates, during which, on average, subsistence fishers harvested between 148 lb (in 2011) and 211 lb (in 2003) (Table 15).

Over the 14 project years, the average weight of subsistence-caught halibut declined from 23.7 lb in 2003 to 18.2 lb in 2008 (a decline of 23%), rose slightly to 19.0 lb in 2009, and then leveled off at 18.4 lb per fish in 2010, 18.3 lb in 2011, 18.5 lb in 2012, and 18.7 lb in 2014 (Table 15). The average weight of a subsistence-caught halibut dropped 21% from 2003 to 2014. However, in 2016, this average rose to 19.8 lb, the highest since 2006, and in 2018, the average increased again to 20.6 lb. In 2020, the average weight declined to 19.5 lb.

After 14 years of the harvest assessment program, it appears likely that the overall larger statewide harvest estimates in 2004, 2005, and 2006, compared to 2003, were, at least in part, a consequence of increased participation of subsistence fishers in the SHARC program after 2003 and, perhaps, an increase in trust on the part of subsistence fishers in the survey. The lower harvest estimates for 2008–2012, 2014, 2016, 2018, and 2020 are likely in part a consequence of reduced participation in the SHARC program, especially among eligible tribal members and especially in Area 4. As community case studies demonstrate (Fall and Koster 2014:20–29), however, a number of factors, some of them methodological, appear to have caused

the differences in harvest estimates over the 14 project years. On the other hand, decreases in subsistence halibut harvests in Area 2C through 2012 appear to reflect declining success in harvests and smaller fish. While survey results for 2014 and 2016 for Area 2C, with higher harvests and larger average fish size, might have been evidence of a reversal of these trends for the Southeast Alaska subsistence halibut fishery, harvests dropped in 2018 and 2020 to the lowest of any study year.

In 2020, most subsistence halibut were harvested with setline (stationary) gear (75%) and the rest with hand-operated gear (25%) (Table 5). Since 2003, the portion of the subsistence halibut harvested with setlines has ranged from 69% in 2007 to 78% in 2012 and 2018.

The largest portion of the Alaska subsistence halibut harvest in 2020 occurred in Regulatory Area 2C (Southeast Alaska), at 55% (290,137 lb), followed by Area 3A (Southcentral Alaska) at 33% (176,993 lb), Area 4E (East Bering Sea Coast) at 6% (33,019 lb), Area 3B (Alaska Peninsula) at 3% (13,861 lb), Area 4A (Eastern Aleutian Islands) at 2% (12,118 lb), Area 4D (Central Bering Sea) at 1% (2,966 lb), Area 4B (Western Aleutian Islands) at less than 1% (987 lb), and Area 4C (Pribilof Islands) at less than 1% (676 lb) (figures 13 and 16). In all previous study years, Area 2C (Southeast Alaska) and Area 3A (Southcentral Alaska) also accounted for most of the subsistence harvests (Figure 16). The portion of the estimated subsistence halibut harvest from Area 4E (East Bering Sea Coast) ranged from about 1% to 2% from 2008 through 2012, although it is likely that harvest estimates for this area for those years were underestimates. Area 4E accounted for between 2% and 6% of the statewide harvest from 2003 through 2007, 9% in 2014, 6% in 2016, 4% in 2018, and 6% in 2020 (Table 6).

The proportion of the statewide subsistence halibut harvest occurring in Area 2C (Southeast Alaska) ranged from 57% to 60% in 2003, 2004, 2012, 2016, and 2018, to between 51% and 56% from 2005 through 2011 and 2020 (Table 6). The portion occurring in Area 3A (Southcentral Alaska) ranged from 27% in 2003 to between 30% and 39% from study years 2004 through 2020. Subsistence harvests accounted for 2% of the total halibut removals in Alaska waters in 2020 (Table 14; Figure 29), similar to past study years.

As discussed above, although comparisons of the harvest estimates since 2003 based on the survey of SHARC holders with those from previous research by the Division of Subsistence are complicated by different research methods, such comparisons may still be instructive. Subsistence harvest estimates for most of the larger communities (combining tribal and rural SHARC holders) such as Sitka, Petersburg, and Kodiak for the first several years of the SHARC surveys were not markedly different from the range of earlier estimates based on household surveys. This is significant in that these communities account for a very large percentage of the total harvest. On the other hand, registration in the SHARC program and survey response rates have declined in several key halibut-fishing communities in Area 4, resulting in underestimated subsistence harvests for that regulatory area. Declining numbers of SHARCs issued in the other regulatory areas also raise questions about trends in participation in the SHARC program, including the survey. We conclude, however, that the 14 years of the survey of SHARC holders produced sound estimates of subsistence harvests of halibut in Alaska based on a scientific sample and a relatively high response rate in Areas 2C and 3A, where approximately 85% to 90% of the subsistence halibut fishing in the state occurs. Future documentation of the subsistence harvests will be necessary for any meaningful discussion of long-term patterns and trends in the fishery.

Recommendations

As noted in Chapter 1, 2020 marked the 14th year of documentation of the subsistence halibut harvests in Alaska, with no harvest estimates available for 2013, 2015, 2017, or 2019. Due to budget constraints, the project will not continue for the 2021 harvest year. We conclude this report with the following recommendations for potential future research based on experiences during the 14 years of this project.

1. The estimates of subsistence halibut harvests in Alaska documented by this program should be updated in the future. As discussed, estimated harvests declined over the first 10 years of the monitoring program, increased slightly in 2014, and then declined again in 2016, 2018, and 2020. Reasons for annual changes and longer trends are likely complex and have not

been explored thoroughly. For example, the number of valid SHARCs has declined, and analysis suggests that a significant number of active subsistence halibut fishers have not renewed their SHARCs. This has resulted in underestimated harvests in the later years of the program in some communities, but may also be evidence that fewer people are participating in the fishery in other communities. Declines in the harvestable surplus of halibut leading to lower catch rates is an additional possible explanation for lower harvests.

2. Over the 14 years of the project, 100,540 SHARC surveys were returned (Table 15). Analysis of this database could reveal patterns in renewals, participation in the fishery, and harvest levels that could be applied to future harvest monitoring efforts. Linked to this analysis could be a systematic survey of a sample of SHARC holders and harvest survey respondents to explore topics such as reasons for renewing or not renewing SHARCs, factors affecting participation in the fishery, and factors influencing harvest rates.
3. Linked to this quantitative analysis, ethnographic investigations should take place in a sample of key halibut fishing communities to evaluate the effects of the 2003 subsistence fishing regulations on fishing patterns as well as patterns of involvement during the first 18 years that the regulations have been in effect. These studies would entail more detailed interviewing of fishers regarding changes in gear choice, fishing effort, harvest amounts, or other fishing activities that have resulted from the regulatory changes, as well as reasons for renewing or not renewing SHARCs. These interviews could also investigate traditional and local knowledge about halibut stocks that might prove useful to agencies, communities, and tribes for future management of the subsistence, sport, and commercial halibut fisheries in Alaska. In addition, participant observation of subsistence halibut fishing could provide important information about the fishery. Findings of these ethnographic investigations should be applied to assist in designing future harvest monitoring programs for the fishery.
4. A recommendation in the final report for the third year of the program was that "implementation of a program to collect harvest data in season in selected communities should be considered on a trial basis to help supplement and evaluate the data collected through the postal survey" (Fall et al. 2006:37). The Division of Subsistence conducted an inseason harvest monitoring project for the subsistence halibut fishery in Sitka and Kodiak in 2006 with funding provided by NMFS. Findings were presented in Special Publication No. 2009-06 (Fall et al. 2009:37). Consideration should be given in the future to inseason monitoring programs in other communities as a method to compare harvest estimates with those from mailed surveys.
5. Further evaluation of several years of sport fishing harvest data achieved through the postal *Statewide Harvest Survey* administered by the Division of Sport Fish could take place for the larger rural communities participating in the subsistence halibut fishery. (Analysis of these data for Sitka was conducted as a pilot effort for 2004; see Fall et al. [2005:22–24]). As discussed in Chapter 2 and Chapter 3, many SHARC holders also reported that they sport fished for halibut in all the study years. It would be instructive to learn if a shift in harvest from the "sport" category to the "subsistence" category, or in the other direction from subsistence to sport, has occurred, in order to evaluate trends in the subsistence fishery and the effect of the new subsistence halibut regulations on fishing patterns.
6. Even without harvest monitoring, additional or renewed outreach is needed in a number of communities with historically high subsistence harvests of halibut but low or declining numbers of SHARCs issued. Contracts with tribal governments could facilitate this outreach.

7. Questions about whether respondents met their needs for halibut were included in the 2020 survey, after having been added for the first time in 2018. As discussed above, about 49.2% of respondents said "no," and gave a wide range of reasons regarding why. The most frequent reason was family or personal reasons, followed by a general lack of fishing effort, with no further explanation connecting to resource conditions, personal circumstances, costs and equipment, or other factors cited by other respondents. Only a preliminary analysis of these responses has been included in this report. With funding, additional analysis could occur along with follow-up field work in selected communities to review the performance of the subsistence halibut fishery in more depth and understand factors that influence participation in the fishery and harvest success. Such research would inform future discussion of halibut management and regulations, especially in the context of declining subsistence harvests and participation in the fishery and the SHARC program.
8. In summary, the results of a quantitative analysis of the 14 years of survey data, systematic interviews, ethnographic research, and inseason harvest monitoring should be evaluated to design a sustainable harvest monitoring program for the Alaska subsistence halibut fishery consistent with available long-term funding. Such a program could be based on a postal survey linked with other data gathering methods in selected communities or regulatory areas, such as face-to-face interviews, calendars, or limited inseason monitoring. Outreach about the subsistence halibut regulations, including the requirement to obtain a SHARC, should be part of any future harvest monitoring program.

TABLES AND FIGURES

Table 1.–Population of rural communities eligible to participate in the Alaska subsistence Pacific halibut fishery, 2000, 2010, and 2020.

		Population (U.S. Census)					
	Regulatory	2000		2010		2020	
Community[a]	area	Total	Alaska Native	Total	Alaska Native	Total	Alaska Native
Angoon	2C	572	419	459	405	357	318
Coffman Cove	2C	199	12	176	10	127	13
Craig	2C	1,397	432	1,201	378	1,036	355
Edna Bay	2C	49	2	42	0	25	0
Elfin Cove	2C	32	0	20	6	24	1
Gustavus	2C	429	32	442	30	655	70
Haines	2C	1,811	332	1,713	278	1,657	309
Hollis	2C	139	13	112	10	65	7
Hoonah	2C	860	597	760	502	931	580
Hydaburg	2C	382	342	376	324	380	335
Hyder	2C	97	4	87	5	48	1
Kake	2C	710	530	557	449	543	469
Kasaan	2C	39	19	49	22	30	9
Klawock	2C	854	496	755	446	720	454
Klukwan	2C	139	123	95	86	87	75
Metlakatla	2C	1,375	1,125	1,405	1,245	1,454	1275
Meyers Chuck	2C	21	2	0	0	0	0
Naukati Bay	2C	135	13	113	9	142	12
Pelican	2C	163	42	88	36	98	30
Petersburg	2C	3,224	388	2,948	390	3,043	452
Point Baker	2C	35	3	15	2	12	2
Port Alexander	2C	81	11	52	3	78	4
Port Protection	2C	63	7	48	13	36	3
Saxman	2C	431	302	411	276	384	316
Sitka	2C	8,835	2,178	8,881	2,184	8,458	2062
Skagway	2C	862	44	920	52	1,164	67
Tenakee Springs	2C	104	5	131	5	116	6
Thorne Bay	2C	552	27	471	23	476	51
Whale Pass	2C	58	2	31	1	86	7
Wrangell	2C	2,308	550	2,369	582	2,127	650
Census area balances[d]	2C			1,230		1,053	217
Subtotal, Area 2C[e]		**25,956**	**8,052**	**25,957**	**7,772**	**25,412**	**8,150**
Akhiok	3A	80	75	71	62	63	56
Chenega Bay	3A	86	67	76	46	59	40
Cordova	3A	2,454	368	2,239	344	2,609	407
Karluk	3A	27	26	37	35	27	26
Kodiak[b]	3A	12,973	1,697	12,824	1,872	12,482	2027

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Table 1.–Page 2 of 4.

Community[a]	Regulatory area	Population 2000 Total	2000 Alaska Native	2010 Total	2010 Alaska Native	2020 Total	2020 Alaska Native
Larsen Bay	3A	115	91	87	66	34	28
Nanwalek	3A	177	165	254	227	247	230
Old Harbor	3A	237	203	218	194	216	185
Ouzinkie	3A	225	197	161	140	109	84
Port Graham	3A	171	151	177	160	162	151
Port Lions	3A	253	163	194	119	170	111
Seldovia	3A	286	66	420	121	434	109
Tatitlek	3A	107	91	88	58	90	77
Yakutat	3A	680	375	662	330	657	347
Census area balances[d]	3A						
Subtotal, Area 3A		**17,871**	**3,735**	**17,508**	**3,774**	**17,359**	**3,878**
Chignik	3B	79	48	91	56	97	69
Chignik Lagoon	3B	103	85	78	58	72	61
Chignik Lake	3B	145	127	73	70	61	57
Cold Bay	3B	88	15	108	20	50	25
False Pass	3B	64	42	35	27	397	47
Ivanof Bay	3B	22	21	7	7	1	0
King Cove	3B	792	379	938	384	757	383
Nelson Lagoon	3B	83	68	52	40	41	38
Perryville	3B	107	105	113	110	88	81
Sand Point	3B	952	421	976	417	578	377
Census area balances[d]	3B			5		8	0
Subtotal, Area 3B		**2,435**	**1,311**	**2,476**	**1,189**	**2,150**	**1,138**
Akutan	4A	713	117	1,027	76	1,589	91
Nikolski	4A	39	27	18	17	39	28
Unalaska	4A	4,283	397	4,376	355	4,254	326
Census area balances[d]	4A			178		3	0
Subtotal, Area 4A		**5,035**	**541**	**5,599**	**448**	**5,885**	**445**
Adak	4B	316	118	326	46	171	53
Atka	4B	92	84	61	58	53	52
Census area balances[d]	4B						
Subtotal, Area 4B		**408**	**202**	**387**	**104**	**224**	**105**
St George Island	4C	152	140	102	92	67	63
St Paul Island	4C	532	460	479	417	413	374
Census area balances[d]	4C						
Subtotal, Area 4C		**684**	**600**	**581**	**509**	**480**	**437**

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Table 1.–Page 3 of 4.

Community[a]	Regulatory area	Population 2000 Total	2000 Alaska Native	2010 Total	2010 Alaska Native	2020 Total	2020 Alaska Native
Gambell	4D	649	622	681	654	640	618
Savoonga	4D	643	614	671	637	835	813
Diomede	4D	146	137	115	110	83	79
Census area balances[d]	4D						
Subtotal, Area 4D		**1,438**	**1,373**	**1,467**	**1,401**	**1,558**	**1,510**
Alakanuk	4E	652	638	677	660	756	724
Aleknagik	4E	221	187	219	185	211	168
Brevig Mission	4E	276	254	388	366	428	393
Bethel	4E	5,471	3,719	6,080	4,334	6,325	4710
Chefornak	4E	394	386	418	403	506	488
Chevak	4E	765	734	938	912	951	927
Clark's Point	4E	75	69	62	55	67	63
Council ANVSA[c]	4E	0	0	0	0	2	1
Dillingham	4E	2,466	1,503	2,329	1,549	2,249	1514
Eek	4E	280	271	296	289	404	397
Egegik	4E	116	89	109	51	39	24
Elim	4E	313	297	330	305	366	340
Emmonak	4E	767	720	762	737	825	794
Golovin	4E	144	133	156	148	175	164
Goodnews Bay	4E	230	216	243	232	258	243
Hooper Bay	4E	1,014	971	1,093	1,070	1,375	1337
King Salmon	4E	442	133	374	132	307	96
Kipnuk	4E	644	631	639	626	704	685
Kongiganak	4E	359	349	439	430	486	478
Kotlik	4E	591	568	577	563	655	654
Koyuk	4E	297	280	332	319	312	296
Kwigillingok	4E	338	331	321	310	380	375
Levelock	4E	122	116	69	62	69	67
Manokotak	4E	399	378	442	425	488	467
Mekoryuk	4E	210	203	191	185	206	196
Naknek	4E	678	319	544	283	470	269
Napakiak	4E	353	341	354	344	358	341
Napaskiak	4E	390	383	405	393	509	494
Newtok	4E	321	311	354	343	209	205
Nightmute	4E	208	197	280	266	306	297
Nome	4E	3,505	2,057	3,598	2,348	3,699	2489

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Table 1.–Page 4 of 4.

Community[a]	Regulatory area	Population 2000 Total	2000 Alaska Native	2010 Total	2010 Alaska Native	2020 Total	2020 Alaska Native
Oscarville	4E	61	61	70	67	70	67
Pilot Point	4E	100	86	68	57	70	59
Platinum	4E	41	38	61	57	55	53
Port Heiden	4E	119	93	102	87	100	86
Quinhagak	4E	555	540	669	650	776	761
Scammon Bay	4E	465	453	474	472	600	596
Saint Michael	4E	368	343	401	379	456	426
Shaktoolik	4E	230	218	251	242	212	187
Nunam Iqua	4E	164	154	187	174	217	212
Shishmaref	4E	562	531	563	540	576	557
Solomon ANVSA	4E	4	3	0	0	1	0
South Naknek	4E	137	115	79	66	67	45
Stebbins	4E	547	518	556	530	634	597
Teller	4E	268	248	229	220	249	234
Togiak	4E	809	750	817	767	817	772
Toksook Bay	4E	532	519	590	555	658	638
Tuntutuliak	4E	370	366	408	396	469	459
Tununak	4E	325	315	327	314	411	400
Twin Hills	4E	69	65	74	72	103	98
Ugashik	4E	11	9	12	9	4	3
Unalakleet	4E	747	655	688	574	765	643
Wales	4E	152	137	145	136	168	151
White Mountain	4E	203	175	190	167	185	173
Census area balances[d]	4E			398		861	503
Subtotal, Area 4E		**28,880**	**23,176**	**30,378**	**24,856**	**32,619**	**27,416**
Grand Total		**82,707**	**38,990**	**84,353**	**40,053**	**85,687**	**43,079**

Sources U.S. Census Bureau (2001; 2011;2021).

a. Alaska Native Village Statistical Area populations were used whenever no city or census designated place (CDP) populations were present in the census.

b. Total population for Kodiak Island road system area; includes Kodiak City, Kodiak Station, Chiniak, and other areas on the road system.

c. There is no census table for a Council CDP or municipality in 2000. The Council ANVSA table indicated that all 40 housing units were vacant in 2000.

d. Population living outside incorporated places and census designated places but eligible for participation in the subsistence halibut fishery as of December 4, 2009.

e. Non-tribal residents of Naukati Bay were not eligible for SHARCs until 2008. This community was not included in population estimates for previous study years.

Table 2.–Project chronology, 2020.

Date	Event/Action
	NOAA Grant Award No. NA18NMF4370086 between NMFS and ADF&G in effect to support the research for study year 2020
January 13, 2021	First mailing of survey forms
March 16, 2021	Second mailing of survey forms
May–June, 2021	Administration of surveys in Sitka, Ketchikan, Tununak, and Nightmute
	Submission of semi-annual report on project progress to NMFS
May 13, 2021	Third mailing of survey forms
November 2, 2021	Submission of semi-annual report on project progress to NMFS
November 30, 2021	Release of public review draft of final report
December 8, 2021	Presentation of study findings, NPFMC, Anchorage
TBD, January 2021	Completion of revised, final report; distribution of findings summary
January 24–28, 2021	Presentation of 2020 study findings at IPHC annual meeting, Seattle, WA

Table 3.–Sample achievement, 2020.

		First mailing			Second mailing			Third mailing			Totals						
Tribal name[a]	Regulatory area	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued[b]	Returned by mail	Returned through staff	Returned online	Response	Response rate	Undeliverable
Angoon Community Association	2C	42	10	4	29	4	0	23	1	0	42	15	0	1	16	38.1%	4
Central Council Tlingit and Haida Indian Tril	2C	392	123	20	252	26	8	208	17	3	392	166	4	17	187	47.7%	31
Chilkat Indian Village	2C	11	3	1	8	1	0	6	1	0	11	5	0	0	5	45.5%	1
Chilkoot Indian Association	2C	34	14	0	20	5	0	19	1	0	34	20	0	0	20	58.8%	0
Craig Community Association	2C	31	13	1	19	2	0	16	0	0	31	15	0	0	15	48.4%	1
Douglas Indian Association	2C	5	1	0	4	2	0	2	0	0	5	3	0	0	3	60.0%	0
Hoonah Indian Association	2C	73	29	6	40	10	1	29	0	0	73	39	0	2	41	56.2%	7
Hydaburg Cooperative Association	2C	25	7	0	17	0	0	17	5	0	25	12	0	1	13	52.0%	0
Ketchikan Indian Corporation	2C	343	94	18	237	38	1	185	8	2	343	140	39	15	194	56.6%	21
Klawock Cooperative Association	2C	37	15	3	21	1	0	19	1	0	37	17	0	1	18	48.6%	3
Metlakatla Indian Community, Annette Islan	2C	71	9	1	62	11	0	50	2	2	71	22	0	5	27	38.0%	3
Organized Village of Kake	2C	50	16	0	36	1	0	32	3	0	50	20	0	2	22	44.0%	0
Organized Village of Kasaan	2C	1									1						
Organized Village of Saxman	2C	10	2	1	7	2	0	5	0	0	10	4	1	0	5	50.0%	1
Petersburg Indian Association	2C	39	20	1	23	4	0	14	4	0	39	28	0	1	29	74.4%	1
Sitka Tribe of Alaska	2C	146	43	6	92	12	2	74	2	2	146	57	13	13	83	56.8%	10
Skagway Village	2C	2									2						
Wrangell Cooperative Association	2C	50	33	2	19	4	0	12	1	0	50	38	0	1	39	78.0%	2
Subtotal, Area 2C	**2C**	**1,362**	**434**	**64**	**889**	**124**	**12**	**714**	**46**	**9**	**1,362**	**604**	**57**	**59**	**720**	**52.9%**	**85**
Kenaitze Indian Tribe	3A	77	30	1	45	10	0	38	1	0	77	41	0	2	43	55.8%	1
Lesnoi Village (Woody Island)	3A	10	3	1	7	0	0	5	0	1	10	3	0	1	4	40.0%	2
Native Village of Afognak	3A	14	9	0	5	3	0	2	0	0	14	12	0	1	13	92.9%	0
Native Village of Akhiok	3A	9	1	0	8	2	0	5	0	0	9	3	0	1	4	44.4%	0
Native Village of Chenega	3A	14	4	1	9	1	0	8	1	0	14	6	0	0	6	42.9%	1
Native Village of Eyak	3A	54	20	1	32	7	1	25	5	0	54	32	0	1	33	61.1%	2
Native Village of Karluk	3A	7	2	0	5	1	0	4	0	0	7	3	0	0	3	42.9%	0
Native Village of Larsen Bay	3A	27	7	0	22	0	0	20	2	0	27	9	0	0	9	33.3%	0
Native Village of Nanwalek	3A	36	8	0	28	3	0	25	0	0	36	11	0	0	11	30.6%	0
Native Village of Ouzinkie	3A	8	2	0	6	2	0	4	0	0	8	4	0	0	4	50.0%	0
Native Village of Port Graham	3A	31	12	2	18	2	0	15	0	0	31	14	0	1	15	48.4%	2
Native Village of Port Lions	3A	18	5	0	12	6	0	7	1	0	18	12	0	3	15	83.3%	0
Native Village of Tatitlek	3A	13	2	2	9	0	0	9	1	0	13	3	0	0	3	23.1%	2
Ninilchik Village	3A	40	24	0	18	0	0	16	0	0	40	24	0	0	24	60.0%	0
Seldovia Village Tribe	3A	39	15	1	23	5	0	18	0	0	39	20	0	0	20	51.3%	1
Sun'aq Tribe of Kodiak (formerly Shoonaq')	3A	83	39	0	47	8	0	34	8	0	83	55	0	2	57	68.7%	0
Village of Kanatak	3A	2									2						
Village of Old Harbor	3A	15	7	0	8	0	0	8	0	0	15	7	0	0	7	46.7%	0
Village of Salamatoff	3A	17	8	1	10	2	0	6	2	0	17	12	0	0	12	70.6%	1
Yakutat Tlingit Tribe	3A	31	11	1	22	2	0	18	0	0	31	13	0	0	13	41.9%	1
Subtotal, Area 3A	**3A**	**545**	**209**	**11**	**336**	**54**	**1**	**269**	**21**	**1**	**545**	**284**	**0**	**12**	**296**	**54.3%**	**13**
Agdaagux Tribe of King Cove	3B	25	10	0	17	0	0	13	0	0	25	10	0	4	14	56.0%	0
Chignik Lake Village	3B	2									2						
Ivanoff Bay Village	3B	2									2						
Native Village of Belkofski	3B	1									1						
Native Village of Chignik	3B	2									2						
Native Village of Chignik Lagoon	3B	5									5						
Native Village of False Pass	3B	12	3	0	11	1	0	8	0	0	12	4	0	0	4	33.3%	0
Native Village of Perryville	3B	6	4	0	2	1	0	1	0	0	6	5	0	0	5	83.3%	0
Native Village of Unga	3B	6	0	0	4	0	0	2	1	0	6	1	0	4	5	83.3%	0
Pauloff Harbor Village	3B	57	10	0	47	1	0	46	2	0	57	13	0	0	13	22.8%	0
Qagan Toyagungin Tribe of Sand Point Villa	3B	277	52	14	217	11	2	201	1	0	277	64	0	3	67	24.2%	16
Subtotal, Area 3B	**3B**	**395**	**86**	**14**	**304**	**14**	**2**	**276**	**4**	**0**	**395**	**104**	**0**	**12**	**116**	**29.4%**	**16**
Native Village of Akutan	4A	47	4	0	44	3	0	40	1	1	47	8	0	0	8	17.0%	1
Qawalingin Tribe of Unalaska	4A	22	2	1	19	1	0	18	0	0	22	3	0	1	4	18.2%	1
Subtotal, Area 4A	**4A**	**69**	**6**	**1**	**63**	**4**	**0**	**58**	**1**	**1**	**69**	**11**	**0**	**1**	**12**	**17.4%**	**2**
Native Village of Atka	4B	2									2						
Subtotal, Area 4B	**4B**	**2**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0.0%**	**0**
Pribilof Islands Aleut Community of St. Geor	4C	2									2						
Pribilof Islands Aleut Community of St. Paul	4C	22	2	2	19	0	0	18	1	0	22	3	0	0	3	13.6%	2
Subtotal, Area 4C	**4C**	**24**	**3**	**2**	**20**	**0**	**0**	**19**	**1**	**0**	**24**	**4**	**0**	**0**	**4**	**16.7%**	**2**
Native Village of Diomede (Inalik)	4D	1									1						
Native Village of Savoonga	4D	1									1						
Subtotal, Area 4D	**4D**	**2**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0.0%**	**0**

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Table 3.–Page 2 of 6.

Tribal name[a]	Regulatory area	First mailing			Second mailing			Third mailing			Totals						
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued[b]	Returned by mail	Returned through staff	Returned online	Response	Response rate	Undeliverable
Chevak Native Village (Kashunamiut)	4E	1									1						
Chinik Eskimo Community	4E	2									2						
Emmonak Village	4E	1									1						
Kasigluk Native Village	4E	0									1						
King Island Native Community	4E	1									1						
Manokotak Village	4E	2									2						
Naknek Native Village	4E	4									4						
Native Village of Aleknagik	4E	5									5						
Native Village of Council	4E	1									1						
Native Village of Dillingham (Curyung)	4E	7	3	0	4	0	0	4	0	0	7	3	0	0	3	42.9%	0
Native Village of Eek	4E	1									1						
Native Village of Ekuk	4E	4									4						
Native Village of Hooper Bay	4E	6	1	0	6	0	0	6	0	0	6	1	0	0	1	16.7%	0
Native Village of Kipnuk	4E	0									1						
Native Village of Koyuk	4E	2									2						
Native Village of Mekoryuk	4E	1									1						
Native Village of Napaskiak	4E	2									2						
Native Village of Nightmute	4E	1	0	0	1	0	0	1	0	0	15	0	14	0	14	93.3%	0
Native Village of Scammon Bay	4E	5									5						
Native Village of Toksook Bay (Nunakauyak)	4E	35	7	0	34	0	0	29	0	0	35	7	0	0	7	20.0%	0
Native Village of Tununak	4E	69	5	0	64	3	0	61	2	0	96	10	27	0	37	38.5%	0
Native Village of Unalakleet	4E	1									1						
Newtok Village	4E	1									1						
Nome Eskimo Community	4E	1									1						
Orutsararmiut Native Village	4E	2									3						
Umkumiute Native Village	4E	0									3						
Village of Alakanuk	4E	2									2						
Village of Chefornak	4E	1									2						
Village of Clark's Point	4E	4									4						
Subtotal, Area 4E	**4E**	**162**	**32**	**0**	**140**	**4**	**0**	**129**	**3**	**1**	**210**	**39**	**48**	**1**	**88**	**41.9%**	**1**
Tribal subtotals		**2,561**	**770**	**92**	**1,756**	**200**	**15**	**1,469**	**76**	**12**	**2,609**	**1,046**	**105**	**85**	**1,236**	**47.4%**	**119**

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Table 3.–Page 3 of 6.

Rural community[a]	Regulatory area	First mailing			Second mailing			Third mailing			Totals						
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued[b]	Returned by mail	Returned through staff	Returned online	Response	Response rate	Undeliverable
Angoon	2C	18	9	0	10	1	0	8	0	0	18	10	0	2	12	66.7%	0
Coffman Cove	2C	36	19	0	17	1	0	14	3	0	36	23	0	3	26	72.2%	0
Craig	2C	237	112	4	117	17	1	92	13	0	237	142	0	12	154	65.0%	5
Edna Bay	2C	13	6	0	7	4	0	5	0	0	13	10	0	0	10	76.9%	0
Elfin Cove	2C	6	1	0	6	0	0	5	0	0	6	1	0	0	1	16.7%	0
Excursion Inlet	2C	5									5						
Gustavus	2C	57	31	0	27	4	0	21	1	0	57	36	0	2	38	66.7%	0
Haines	2C	369	204	0	169	46	0	103	3	0	369	253	0	33	286	77.5%	0
Hollis	2C	41	25	1	15	2	0	11	2	0	41	29	0	2	31	75.6%	1
Hoonah	2C	68	34	1	36	5	0	26	6	0	68	45	0	4	49	72.1%	1
Hydaburg	2C	7	4	0	3	0	1	2	0	0	7	4	0	0	4	57.1%	1
Hyder	2C	9	6	0	3	0	0	3	0	0	9	6	0	0	6	66.7%	0
Juneau	2C	1									1						
Kake	2C	34	10	0	23	3	0	19	2	0	34	15	0	5	20	58.8%	0
Kasaan	2C	8	4	1	3	0	0	3	1	0	8	5	0	0	5	62.5%	1
Klawock	2C	116	53	4	59	15	0	43	2	2	116	70	0	9	79	68.1%	6
Klukwan	2C	4									4						
Metlakatla	2C	34	13	2	25	3	0	18	1	0	34	17	0	0	17	50.0%	2
Meyers Chuck	2C	8	3	0	6	1	0	5	0	0	8	4	0	1	5	62.5%	0
Naukati Bay	2C	44	23	0	20	6	0	13	1	1	44	30	0	2	32	72.7%	1
Pelican	2C	24	16	0	7	0	0	7	1	0	24	17	0	1	18	75.0%	0
Petersburg	2C	727	396	6	318	67	1	220	18	0	727	481	1	57	539	74.1%	7
Point Baker	2C	8	5	0	3	2	0	1	0	0	8	7	0	0	7	87.5%	0
Port Alexander	2C	19	12	1	11	2	1	4	0	0	19	14	1	0	15	78.9%	2
Port Protection	2C	12	4	0	8	0	0	8	0	0	12	4	2	0	6	50.0%	0
Saxman	2C	21	6	0	17	1	0	14	1	2	21	8	5	0	13	61.9%	2
Sitka	2C	1,138	542	9	557	68	8	439	27	5	1,138	637	98	82	817	71.8%	22
Skagway	2C	56	32	0	23	3	0	18	2	0	56	37	0	4	41	73.2%	0
Tenakee Springs	2C	38	25	0	19	7	0	9	3	0	38	35	0	0	35	92.1%	0
Thorne Bay	2C	104	66	3	41	11	0	24	1	0	104	78	0	5	83	79.8%	3
Ward Cove	2C	3	2	0	1	0	0	1	0	0	3						
Whale Pass	2C	25	10	0	15	2	0	13	1	1	25	13	0	1	14	56.0%	1
Wrangell	2C	387	210	6	167	39	2	113	11	0	387	260	0	27	287	74.2%	8
Subtotal, Area 2C	**2C**	**3,677**	**1,889**	**38**	**1,739**	**311**	**14**	**1,266**	**100**	**11**	**3,677**	**2,300**	**107**	**252**	**2,659**	**72.3%**	**63**
Akhiok	3A	10	1	0	9	1	0	8	0	0	10	2	0	0	2	20.0%	0
Chenega Bay	3A	1									1						
Chiniak	3A	4									4						
Cordova	3A	400	202	2	193	32	0	145	12	1	400	246	0	33	279	69.8%	3
Kodiak	3A	990	487	13	500	98	4	359	35	2	990	620	0	48	668	67.5%	19
Larsen Bay	3A	6	0	0	4	1	0	4	1	0	6	2	0	2	4	66.7%	0
Nanwalek	3A	11	3	0	10	0	0	7	0	0	11	3	0	1	4	36.4%	0
Old Harbor	3A	7	2	0	6	1	0	4	1	0	7	4	0	0	4	57.1%	0
Ouzinkie	3A	8	4	1	4	0	0	4	0	0	8	4	0	0	4	50.0%	1
Port Graham	3A	10	8	0	2	0	0	2	0	0	10	8	0	0	8	80.0%	0
Port Lions	3A	15	8	0	8	1	0	6	0	0	15	9	0	0	9	60.0%	0
Seldovia	3A	125	52	0	79	27	0	49	10	0	125	89	0	5	94	75.2%	0
Tatitlek	3A	8	3	0	8	0	0	5	2	0	8	5	0	0	5	62.5%	0
Yakutat	3A	43	15	0	28	5	0	22	4	0	43	24	0	4	28	65.1%	0
Subtotal, Area 3A	**3A**	**1,638**	**789**	**16**	**852**	**167**	**4**	**615**	**65**	**3**	**1,638**	**1,021**	**0**	**93**	**1,114**	**68.0%**	**23**
Chignik	3B	1									1						
Chignik Lagoon	3B	1									1						
Cold Bay	3B	9	5	0	4	1	0	3	1	0	9	7	0	0	7	77.8%	0
False Pass	3B	1									1						
King Cove	3B	6	2	0	3	0	0	3	0	0	6	2	0	1	3	50.0%	0
Sand Point	3B	7	5	0	4	0	0	3	1	0	7	6	0	0	6	85.7%	0
Subtotal, Area 3B	**3B**	**25**	**14**	**0**	**12**	**1**	**1**	**9**	**2**	**0**	**25**	**17**	**0**	**1**	**18**	**72.0%**	**1**
Akutan	4A	2									2						
Nikolaki	4A	1									1						
Unalaska	4A	90	36	2	56	5	0	54	3	0	90	44	0	0	44	48.9%	2
Subtotal, Area 4A	**4A**	**93**	**36**	**2**	**59**	**5**	**0**	**57**	**3**	**0**	**93**	**44**	**0**	**0**	**44**	**47.3%**	**2**
Adak	4B	4									4						
Subtotal, Area 4B	**4B**	**4**	**1**	**0**	**3**	**3**	**0**	**0**	**0**	**0**	**4**	**4**	**0**	**0**	**4**	**100.0%**	**0**
St. George Island	4C	1									1						
St. Paul Island	4C	7	0	0	7	0	0	7	0	0	7	0	0	0	0	0.0%	0
Subtotal, Area 4C	**4C**	**8**	**0**	**0**	**8**	**0**	**0**	**8**	**0**	**0**	**8**	**0**	**0**	**1**	**1**	**12.5%**	**0**

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Table 3.–Page 4 of 6.

Rural community[a]	Regulatory area	First mailing			Second mailing			Third mailing			Totals						
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued[b]	Returned by mail	Returned through staff	Returned online	Response	Response rate	Undeliverable
Gambell	4D	2									2						
Savoonga	4D	12	1	0	11	1	0	10	0	0	12	2	0	0	2	16.7%	0
Subtotal, Area 4D	**4D**	**14**	**1**	**1**	**12**	**1**	**0**	**11**	**0**	**0**	**14**	**2**	**0**	**0**	**2**	**14.3%**	**1**
Aleknagik	4E	4									4						
Bethel	4E	1									1						
Dillingham	4E	20	12	1	7	2	0	5	1	0	20	15	0	1	16	80.0%	1
Hooper Bay	4E	1									1						
King Salmon	4E	7	2	0	4	0	0	4	0	0	7	2	0	1	3	42.9%	0
Koyuk	4E	1									1						
Naknek	4E	9	4	0	5	2	0	3	0	0	9	6	0	0	6	66.7%	0
Nightmute	4E	0	0	0	0	0	0	0	0	0	9	0	9	0	9	100.0%	0
Nome	4E	11	3	1	6	1	0	6	0	0	11	4	0	2	6	54.5%	1
Port Heiden	4E	2									2						
Togiak	4E	1									1						
Unalakleet	4E	1									1						
Subtotal, Area 4E	**4E**	**58**	**27**	**2**	**25**	**5**	**0**	**21**	**2**	**0**	**67**	**34**	**9**	**6**	**49**	**73.1%**	**2**
Rural community subtotal		**5,517**	**2,757**	**59**	**2,710**	**493**	**19**	**1,987**	**172**	**14**	**5,526**	**3,422**	**116**	**353**	**3,891**	**70.4%**	**92**
Rural/Tribal grand total		**8,078**	**3,527**	**151**	**4,466**	**693**	**34**	**3,456**	**248**	**26**	**8,135**	**4,468**	**221**	**438**	**5,127**	**63.0%**	**211**

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Table 3.–Page 5 of 6.

Community of residence	Regulatory area	First mailing			Second mailing			Third mailing			Totals						
		Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued[a]	Returned by mail	Returned through staff	Returned online	Response	Response rate	Undeliverable
Adak	AK	6	2	0	4	3	0	1	0	0	6	5	0	1	6	100.0%	0
Akhiok	AK	16	1	0	15	3	0	11	0	0	16	4	0	1	5	31.3%	0
Akutan	AK	50	5	0	46	3	0	42	1	1	50	9	0	0	9	18.0%	1
Aleknagik	AK	7	4	0	4	0	0	2	0	0	7	4	0	1	5	71.4%	0
Anchor Point	AK	7	6	0	0	0	0	0	0	0	7	6	0	1	7	100.0%	0
Anchorage	AK	101	42	3	56	6	0	48	5	1	101	53	0	5	58	57.4%	4
Angoon	AK	60	20	4	38	5	0	31	1	0	60	26	0	1	27	45.0%	4
Auke Bay	AK	2									2						
Barrow	AK	2									2						
Bethel	AK	1									1						
Big Lake	AK	1									1						
Cantwell	AK	1									1						
Chenega Bay	AK	4									4						
Chignik	AK	3									3						
Chignik Lagoon	AK	5									5						
Chignik Lake	AK	1									1						
Chiniak	AK	17	13	0	4	2	1	1	0	0	17	15	0	0	15	88.2%	1
Chugiak	AK	2									2						
Clarks Point	AK	3									3						
Coffman Cove	AK	35	18	0	17	2	0	13	3	0	35	23	0	3	26	74.3%	0
Cold Bay	AK	10	4	0	6	0	0	6	2	0	10	6	0	0	6	60.0%	0
Cordova	AK	444	215	3	222	35	1	171	17	1	444	267	0	34	301	67.8%	5
Craig	AK	354	160	9	181	30	1	144	16	1	354	206	0	15	221	62.4%	11
Delta Junction	AK	2									2						
Dillingham	AK	30	16	1	13	2	0	11	1	0	30	19	0	1	20	66.7%	1
Douglas	AK	19	5	1	15	4	0	9	1	0	19	10	0	0	10	52.6%	1
Dutch Harbor	AK	55	19	1	38	5	0	36	2	0	55	26	0	0	26	47.3%	1
Eagle River	AK	7	3	0	4	1	0	3	1	0	7	5	0	0	5	71.4%	0
Edna Bay	AK	11	4	0	7	4	0	5	0	0	11	8	0	0	8	72.7%	0
Eek	AK	1									1						
Elfin Cove	AK	7	1	0	7	1	0	5	0	0	7	2	0	0	2	28.6%	0
Emmonak	AK	1									1						
Excursion Inlet	AK	2									2						
Fairbanks	AK	3									3						
False Pass	AK	10	2	0	10	1	0	7	0	0	10	3	0	0	3	30.0%	0
Gambell	AK	1									1						
Gustavus	AK	56	30	0	27	4	0	21	1	0	56	35	0	2	37	66.1%	0
Haines	AK	413	219	0	200	49	0	132	5	1	413	273	0	32	305	73.8%	1
Homer	AK	16	9	0	7	1	0	6	1	0	16	11	0	0	11	68.8%	0
Hoonah	AK	150	61	8	86	15	0	66	5	0	150	81	0	7	88	58.7%	8
Hooper Bay	AK	7	1	0	7	0	0	7	1	0	7	2	0	0	2	28.6%	0
Hydaburg	AK	29	9	0	19	0	1	18	5	0	29	14	0	1	15	51.7%	1
Hyder	AK	9	6	0	3	0	0	3	0	0	9	6	0	0	6	66.7%	0
Juneau	AK	244	84	12	149	12	9	119	6	0	244	102	0	16	118	48.4%	21
Kake	AK	83	26	0	58	5	0	49	5	0	83	36	0	7	43	51.8%	0
Karluk	AK	7	2	0	5	1	0	4	0	0	7	3	0	0	3	42.9%	0
Kasaan	AK	6	3	1	2	1	0	2	0	0	6	4	0	0	4	66.7%	1
Kasigluk	AK	0									1						
Kasilof	AK	5									5						
Kenai	AK	58	27	1	36	5	0	28	1	0	58	33	0	0	33	56.9%	1
Ketchikan	AK	402	112	16	280	41	2	225	12	7	402	165	45	19	229	57.0%	25
King Cove	AK	34	11	0	24	0	0	20	1	0	34	12	0	5	17	50.0%	0
King Salmon	AK	8	2	0	5	1	0	4	0	0	8	3	0	1	4	50.0%	0
Klawock	AK	159	76	6	79	13	0	60	5	1	159	94	0	10	104	65.4%	7
Klukwan	AK	1	0	0	1	1	0	0	0	0	1						
Kodiak	AK	1,072	513	16	556	107	4	401	45	3	1,072	665	0	51	716	66.8%	23
Larsen Bay	AK	29	6	0	23	1	0	21	3	0	29	10	0	2	12	41.4%	0
Manokotak	AK	1									1						
Metlakatla	AK	97	22	4	79	13	0	60	3	1	97	38	0	2	40	41.2%	5
Meyers Chuck	AK	8	3	0	6	1	0	5	0	0	8	4	0	1	5	62.5%	0
Naknek	AK	10	4	0	6	1	0	5	0	0	10	5	0	0	5	50.0%	0
Nanwalek	AK	43	11	0	34	3	0	28	0	0	43	14	0	1	15	34.9%	0
Naukati Bay	AK	10	6	0	2	0	0	2	0	0	10	6	0	2	8	80.0%	0
Nightmute	AK	0	0	0	0	0	0	0	0	0	27	0	27	0	27	100.0%	0
Nikiski	AK	8	1	0	7	0	0	7	1	0	8	2	0	0	2	25.0%	0
Ninilchik	AK	16	8	0	8	1	0	7	0	0	16	9	0	0	9	56.3%	0

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Table 3.--Page 6 of 6.

		First mailing			Second mailing			Third mailing			Totals						
Community of residence	State of residence	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued[2]	Returned by mail	Returned through staff	Returned online	Response	Response rate	Undeliverable
Nome	AK	13	5	0	7	1	0	7	0	0	13	6	0	2	8	61.5%	0
North Pole	AK	1									1						
Nunapitchuk	AK	1									1						
Old Harbor	AK	17	6	0	12	1	0	10	0	0	17	7	0	0	7	41.2%	0
Ouzinkie	AK	7	4	0	4	1	0	3	0	0	7	5	0	0	5	71.4%	0
Palmer	AK	9	6	1	3	2	0	0	0	0	9	8	0	0	8	88.9%	1
Pelican	AK	29	19	0	11	0	0	8	2	0	29	21	0	2	23	79.3%	0
Perryville	AK	7	4	0	3	1	0	2	0	0	7	5	0	0	5	71.4%	0
Petersburg	AK	776	419	7	345	73	1	238	23	0	776	515	0	59	574	74.0%	8
Point Baker	AK	14	9	0	5	2	0	3	0	0	14	11	0	0	11	78.6%	0
Port Alexander	AK	17	13	1	8	2	0	2	0	0	17	15	0	0	15	88.2%	1
Port Graham	AK	35	14	2	20	1	0	18	0	0	35	15	0	1	16	45.7%	2
Port Heiden	AK	2									2						
Port Lions	AK	27	9	0	18	6	0	11	0	0	27	15	0	4	19	70.4%	0
Port Protection	AK	1									1						
Saint Paul Island	AK	30	2	2	27	0	0	26	1	0	30	3	0	0	3	10.0%	2
Sand Point	AK	321	63	14	252	11	1	235	3	0	321	77	0	3	80	24.9%	15
Savoonga	AK	12	1	0	11	1	0	10	0	0	12	2	0	0	2	16.7%	0
Saxman	AK	8	5	1	4	0	0	2	0	0	8	5	0	0	5	62.5%	1
Seldovia	AK	138	56	1	87	29	0	55	10	0	138	95	0	5	100	72.5%	1
Seward	AK	2	1	0	1	0	0	1	0	0	2						
Sitka	AK	1,272	576	15	644	79	10	510	26	8	1,272	681	119	96	896	70.4%	33
Skagway	AK	56	31	0	26	4	0	20	2	0	56	37	0	4	41	73.2%	0
Soldotna	AK	30	8	1	21	6	0	17	0	0	30	14	0	1	15	50.0%	1
South Naknek	AK	1									1						
Sterling	AK	10	5	0	4	3	0	1	0	0	10	8	0	0	8	80.0%	0
Sutton	AK	1									1						
Tatitlek	AK	12	3	0	10	0	0	9	1	0	12	4	0	0	4	33.3%	0
Tenakee Springs	AK	36	22	0	20	7	0	10	3	0	36	32	0	0	32	88.9%	0
Thorne Bay	AK	107	68	3	42	11	0	25	2	0	107	81	0	5	86	80.4%	3
Tok	AK	1									1						
Toksook Bay	AK	38	6	0	38	0	0	33	0	0	38	6	0	0	6	15.8%	0
Tununak	AK	69	5	0	64	3	0	61	2	0	98	10	29	0	39	39.8%	0
Unalakleet	AK	2									2						
Unalaska	AK	55	18	1	37	2	0	36	0	0	55	20	0	0	20	36.4%	1
Valdez	AK	19	5	1	15	3	0	10	1	0	19	9	0	0	9	47.4%	1
Ward Cove	AK	25	5	2	18	2	0	16	0	0	25	7	0	0	7	28.0%	2
Wasilla	AK	16	5	0	12	0	0	12	1	1	16	6	0	0	6	37.5%	1
Whale Pass	AK	4									4						
Wrangell	AK	462	246	12	204	45	2	139	11	0	462	302	0	28	330	71.4%	14
Yakutat	AK	70	23	1	47	8	0	38	4	0	70	35	0	4	39	55.7%	1
Subtotal, Alaska		**8,015**	**3,486**	**151**	**4,441**	**688**	**34**	**3,436**	**244**	**26**	**8,072**	**4,418**	**221**	**438**	**5,077**	**62.9%**	**211**
Subtotal, non-Alaska		**63**	**41**	**0**	**25**	**5**	**0**	**20**	**4**	**0**	**63**	**50**	**0**	**0**	**50**	**79.4%**	**0**
Community of residence grand total		**8,078**	**3,527**	**151**	**4,466**	**693**	**34**	**3,456**	**248**	**26**	**8,135**	**4,468**	**221**	**438**	**5,127**	**63.0%**	**211**

Note To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals inlcude all tribes and communities.

Table 4.–Estimated subsistence harvests of halibut in Alaska, by SHARC type and regulatory area, 2020.

		Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest	
Tribal name	Regulatory area	SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds
Angoon Community Association	2C	42	16	38.1%	10	23.8%	186	3,495	5	10.7%	7	169
Central Council Tlingit and Haida Indian Tribes	2C	392	187	47.7%	137	34.9%	881	22,151	102	26.0%	370	6,340
Chilkat Indian Village	2C	11	5	45.5%	2	18.2%	6	90	2	18.2%	8	90
Chilkoot Indian Association	2C	34	20	58.8%	15	43.7%	61	1,192	0	0.0%	0	0
Craig Community Association	2C	31	15	48.4%	13	43.0%	80	2,401	0	0.0%	0	0
Douglas Indian Association	2C	5										
Hoonah Indian Association	2C	73	41	56.2%	33	44.6%	389	7,113	10	14.3%	40	574
Hydaburg Cooperative Association	2C	25	13	52.0%	9	34.0%	29	1,142	0	0.0%	0	0
Ketchikan Indian Corporation	2C	343	194	56.6%	100	29.3%	1,063	19,119	98	28.6%	292	5,247
Klawock Cooperative Association	2C	37	18	48.6%	17	46.8%	94	2,668	0	0.0%	0	0
Metlakatla Indian Community, Annette Island Reserve	2C	71	27	38.0%	36	51.1%	138	3,653	23	32.7%	8	141
Organized Village of Kake	2C	50	22	44.0%	18	35.3%	119	4,808	0	0.0%	0	0
Organized Village of Kasaan	2C	1										
Organized Village of Saxman	2C	10	5	50.0%	2	20.0%	0	0	4	40.0%	12	225
Petersburg Indian Association	2C	39	29	74.4%	11	27.5%	59	796	3	7.4%	4	42
Sitka Tribe of Alaska	2C	146	83	56.8%	48	32.7%	201	5,841	5	3.2%	1	41
Skagway Village	2C	2										
Wrangell Cooperative Association	2C	50	39	78.0%	27	53.3%	346	7,413	13	26.3%	32	739
Subtotal, Area 2C	**2C**	**1,362**	**720**	**52.9%**	**480**	**35.2%**	**3,667**	**82,308**	**265**	**19.4%**	**775**	**13,606**
Kenaitze Indian Tribe	3A	77	43	55.8%	9	12.2%	83	1,183	12	15.2%	59	803
Lesnoi Village (Woody Island)	3A	10	4	40.0%	2	20.0%	16	305	1	10.0%	4	150
Native Village of Afognak	3A	14	13	92.9%	3	21.4%	8	131	3	21.4%	10	248
Native Village of Akhiok	3A	9	4	44.4%	7	77.8%	11	165	0	0.0%	0	0
Native Village of Chenega	3A	14	6	42.9%	6	42.9%	33	600	2	14.3%	2	60
Native Village of Eyak	3A	54	33	61.1%	25	45.6%	215	4,080	9	15.7%	11	278
Native Village of Karluk	3A	7	3	42.9%	5	66.7%	14	254	0	0.0%	0	0
Native Village of Larsen Bay	3A	27	9	33.3%	11	42.2%	325	2,370	8	28.9%	27	593
Native Village of Nanwalek	3A	36	11	30.6%	15	40.7%	208	4,469	4	12.0%	13	179
Native Village of Ouzinkie	3A	8	4	50.0%	5	62.5%	56	1,020	1	12.5%	0	0
Native Village of Port Graham	3A	31	15	48.4%	20	64.5%	320	3,080	0	0.0%	0	0
Native Village of Port Lions	3A	18	15	83.3%	10	53.7%	72	1,578	9	50.0%	38	651
Native Village of Tatitlek	3A	13	3	23.1%	6	46.2%	38	743	1	7.7%	0	0
Ninilchik Village	3A	40	24	60.0%	7	17.8%	59	952	15	36.5%	88	2,225
Seldovia Village Tribe	3A	39	20	51.3%	17	42.3%	229	4,729	3	7.7%	14	164
Sun'aq Tribe of Kodiak (formerly Shoonaq')	3A	83	57	68.7%	33	39.5%	212	4,234	14	16.9%	26	473
Village of Kanatak	3A	2										
Village of Old Harbor	3A	15	7	46.7%	6	40.0%	33	510	5	30.0%	21	143
Village of Salamatoff	3A	17	12	70.6%	4	21.6%	39	647	3	15.7%	24	240
Yakutat Tlingit Tribe	3A	31	13	41.9%	19	61.3%	193	5,306	0	0.0%	0	0
Subtotal, Area 3A	**3A**	**545**	**296**	**54.3%**	**209**	**38.3%**	**2,163**	**36,355**	**88**	**16.2%**	**336**	**6,203**
Agdaagux Tribe of King Cove	3B	25	14	56.0%	20	80.0%	141	2,822	0	0.0%	0	0
Chignik Lake Village	3B	2										
Ivanoff Bay Village	3B	2										
Native Village of Belkofski	3B	1										
Native Village of Chignik	3B	2										
Native Village of Chignik Lagoon	3B	5										
Native Village of False Pass	3B	12	4	33.3%	11	91.7%	33	1,155	1	8.3%	7	195
Native Village of Perryville	3B	6	5	83.3%	6	100.0%	47	688	0	0.0%	0	0
Native Village of Unga	3B	6	5	83.3%	1	16.7%	20	90	0	0.0%	0	0

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Table 4.–Page 2 of 4.

Tribal name	Regulatory area	Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest	
		SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds
Pauloff Harbor Village	3B	57	13	22.8%	35	61.5%	228	3,223	9	15.4%	35	362
Qagan Toyagungin Tribe of Sand Point Village	3B	277	67	24.2%	76	27.5%	315	5,562	13	4.8%	20	535
Subtotal, Area 3B	**3B**	**395**	**116**	**29.4%**	**151**	**38.3%**	**795**	**13,738**	**24**	**6.1%**	**63**	**1,103**
Native Village of Akutan	4A	47	8	17.0%	15	31.9%	150	6,251	0	0.0%	0	0
Qawalingin Tribe of Unalaska	4A	22	4	18.2%	7	31.8%	2	46	0	0.0%	0	0
Subtotal, Area 4A	**4A**	**69**	**12**	**17.4%**	**22**	**31.9%**	**152**	**6,297**	**0**	**0.0%**	**0**	**0**
Native Village of Atka	4B	2										
Subtotal, Area 4B	**4B**	**2**	**0**	**0.0%**	**0**	**0.0%**	**0**	**0**	**0**	**0.0%**	**0**	**0**
Pribilof Islands Aleut Community of St. George	4C	2										
Pribilof Islands Aleut Community of St. Paul	4C	22	3	13.6%	12	54.5%	115	3,300	0	0.0%	0	0
Subtotal, Area 4C	**4C**	**24**	**4**	**16.7%**	**13**	**54.2%**	**134**	**3,750**	**0**	**0.0%**	**0**	**0**
Native Village of Diomede (Inalik)	4D	1										
Native Village of Savoonga	4D	1										
Subtotal, Area 4D	**4D**	**2**										
Chevak Native Village (Kashunamiut)	4E	1										
Chinik Eskimo Community	4E	2										
Emmonak Village	4E	1										
Kasigluk Native Village	4E	1										
King Island Native Community	4E	1										
Manokotak Village	4E	2										
Naknek Native Village	4E	4										
Native Village of Aleknagik	4E	5										
Native Village of Council	4E	1										
Native Village of Dillingham (Curyung)	4E	7	3	42.9%	2	28.6%	3	38	0	0.0%	0	0
Native Village of Eek	4E	1										
Native Village of Ekuk	4E	4										
Native Village of Hooper Bay	4E	6	1	16.7%	6	100.0%	6	180	0	0.0%	0	0
Native Village of Kipnuk	4E	1										
Native Village of Koyuk	4E	2										
Native Village of Mekoryuk	4E	1										
Native Village of Napaskiak	4E	2										
Native Village of Nightmute	4E	15	14	93.3%	14	93.3%	332	5,029	0	0.0%	0	0
Native Village of Scammon Bay	4E	5										
Native Village of Toksook Bay (Nunakauyak)	4E	35	7	20.0%	19	54.3%	211	1,535	0	0.0%	0	0
Native Village of Tununak	4E	96	37	38.5%	82	85.9%	1,536	21,263	0	0.0%	0	0
Native Village of Unalakleet	4E	1										
Newtok Village	4E	1										
Nome Eskimo Community	4E	1										
Orutsararmiut Native Village	4E	3										
Umkumiute Native Village	4E	3										
Village of Alakanuk	4E	2										
Village of Chefornak	4E	2										
Village of Clark's Point	4E	4										
Subtotal, Area 4E	**4E**	**210**	**88**	**41.9%**	**140**	**66.9%**	**2,198**	**30,208**	**5**	**2.4%**	**7**	**98**
Tribal subtotal		**2,609**	**1,236**	**47.4%**	**1,015**	**38.9%**	**9,109**	**172,656**	**382**	**14.6%**	**1,181**	**21,010**

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Table 4.–Page 3 of 4.

Rural community	Regulatory area	Return rate: SHARCs issued[a]	Return rate: Surveys returned	Return rate: Percent	Subsistence fished halibut: Estimated number respondents	Subsistence fished halibut: Percent of SHARCs	Subsistence halibut harvest: Estimated number fish	Subsistence halibut harvest: Estimated number pounds	Sport fished halibut: Estimated number respondents	Sport fished halibut: Percent of SHARCs	Sport halibut harvest: Estimated number fish	Sport halibut harvest: Estimated number pounds
Angoon	2C	18	12	66.7%	9	50.0%	82	1,558	1	5.6%	2	23
Coffman Cove	2C	36	26	72.2%	12	33.5%	39	992	17	46.3%	61	1,085
Craig	2C	237	154	65.0%	103	43.5%	556	12,455	83	35.1%	315	4,746
Edna Bay	2C	13	10	76.9%	11	84.6%	38	1,523	3	23.1%	2	32
Elfin Cove	2C	6	1	16.7%	2	33.3%	0	0	0	0.0%	0	0
Excursion Inlet	2C	5										
Gustavus	2C	57	38	66.7%	27	46.8%	223	4,670	21	36.6%	122	3,294
Haines	2C	369	286	77.5%	225	61.0%	1,021	18,727	59	15.9%	99	1,778
Hollis	2C	41	31	75.6%	15	37.2%	72	1,370	12	28.3%	53	567
Hoonah	2C	68	49	72.1%	14	21.0%	94	2,665	15	21.7%	113	2,086
Hydaburg	2C	7	4	57.1%	1	14.3%	13	616	1	14.3%	1	35
Hyder	2C	9	6	66.7%	4	44.4%	24	795	3	27.8%	0	0
Juneau	2C	1										
Kake	2C	34	20	58.8%	17	49.7%	91	2,391	8	23.5%	6	155
Kasaan	2C	8	5	62.5%	3	41.7%	2	105	3	41.7%	0	0
Klawock	2C	116	79	68.1%	57	49.1%	353	6,558	36	31.1%	106	1,716
Klukwan	2C	4										
Metlakatla	2C	34	17	50.0%	12	35.3%	134	2,108	7	21.6%	28	575
Meyers Chuck	2C	8	5	62.5%	3	37.5%	19	465	1	12.5%	2	94
Naukati Bay	2C	44	32	72.7%	19	43.2%	59	1,787	9	21.4%	27	405
Pelican	2C	24	18	75.0%	14	56.3%	60	1,604	6	22.9%	11	238
Petersburg	2C	727	539	74.1%	343	47.2%	2,138	39,609	185	25.4%	667	10,637
Point Baker	2C	8	7	87.5%	5	62.5%	18	454	1	12.5%	1	23
Port Alexander	2C	19	15	78.9%	14	71.1%	54	1,256	6	28.9%	7	139
Port Protection	2C	12	6	50.0%	4	33.3%	11	244	3	25.0%	8	101
Saxman	2C	21	13	61.9%	6	27.0%	17	375	9	42.9%	183	2,500
Sitka	2C	1,138	817	71.8%	565	49.6%	2,962	67,256	276	24.3%	817	15,201
Skagway	2C	56	41	73.2%	40	70.6%	195	4,144	10	18.5%	34	377
Tenakee Springs	2C	38	35	92.1%	17	44.3%	87	1,678	13	35.1%	54	773
Thorne Bay	2C	104	83	79.8%	54	52.3%	289	6,589	37	35.4%	113	1,504
Ward Cove	2C	3										
Whale Pass	2C	25	14	56.0%	4	14.7%	21	455	7	29.3%	7	201
Wrangell	2C	387	287	74.2%	187	48.2%	1,159	23,925	93	23.9%	347	7,306
Subtotal, Area 2C	**2C**	**3,677**	**2,659**	**72.3%**	**1,792**	**48.7%**	**9,857**	**207,072**	**925**	**25.1%**	**3,199**	**55,665**
Akhiok	3A	10	2	20.0%	3	25.0%	93	2,906	0	0.0%	0	0
Chenega Bay	3A	1										
Chiniak	3A	4										
Cordova	3A	400	279	69.8%	206	51.5%	1,546	27,388	100	25.1%	222	4,783
Kodiak	3A	990	668	67.5%	551	55.6%	4,695	86,109	368	37.2%	1,735	33,886
Larsen Bay	3A	6	4	66.7%	6	100.0%	51	542	3	50.0%	14	255
Nanwalek	3A	11	4	36.4%	5	45.5%	24	591	0	0.0%	0	0
Old Harbor	3A	7	4	57.1%	6	85.7%	24	300	1	14.3%	5	38
Ouzinkie	3A	8	4	50.0%	3	37.5%	38	850	0	0.0%	0	0
Port Graham	3A	10	8	80.0%	5	50.0%	66	510	0	0.0%	0	0
Port Lions	3A	15	9	60.0%	11	73.3%	76	1,649	8	53.3%	25	480
Seldovia	3A	125	94	75.2%	62	49.4%	714	11,613	37	29.5%	252	4,255
Tatitlek	3A	8	5	62.5%	5	62.5%	51	1,388	0	0.0%	0	0
Yakutat	3A	43	28	65.1%	26	59.7%	226	4,623	14	32.9%	56	960
Subtotal, Area 3A	**3A**	**1,638**	**1,114**	**68.0%**	**892**	**54.4%**	**7,627**	**139,015**	**534**	**32.6%**	**2,314**	**44,784**

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Table 4.–Page 4 of 4.

Rural community	Regulatory area	Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest	
		SHARCs issued[a]	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds
Chignik	3B	1										
Chignik Lagoon	3B	1										
Cold Bay	3B	9	7	77.8%	3	33.3%	13	169	1	11.1%	0	0
False Pass	3B	1										
King Cove	3B	6	3	50.0%	2	33.3%	9	120	1	16.7%	0	0
Sand Point	3B	7	6	85.7%	3	46.4%	59	990	0	0.0%	0	0
Subtotal, Area 3B	**3B**	**25**	**18**	**72.0%**	**9**	**37.0%**	**88**	**1,485**	**3**	**12.0%**	**6**	**98**
Akutan	4A	2										
Nikolski	4A	1										
Unalaska	4A	90	44	48.9%	31	34.0%	289	5,299	27	30.4%	132	2,368
Subtotal, Area 4A	**4A**	**93**	**44**	**47.3%**	**31**	**32.9%**	**289**	**5,299**	**27**	**29.4%**	**132**	**2,368**
Adak	4B	4										
Subtotal, Area 4B	**4B**	**4**	**4**	**100.0%**	**3**	**75.0%**	**11**	**263**	**1**	**25.0%**	**3**	**75**
St. George Island	4C	1										
St. Paul Island	4C	7	0	0.0%	0	0.0%	0	0	0	0.0%	0	0
Subtotal, Area 4C	**4C**	**8**	**1**	**12.5%**	**0**	**0.0%**	**0**	**0**	**0**	**0.0%**	**0**	**0**
Gambell	4D	2										
Savoonga	4D	12	2	16.7%	7	58.3%	112	2,966	0	0.0%	0	0
Subtotal, Area 4D	**4D**	**14**	**2**	**14.3%**	**7**	**50.0%**	**112**	**2,966**	**0**	**0.0%**	**0**	**0**
Aleknagik	4E	4										
Bethel	4E	1										
Dillingham	4E	20	16	80.0%	10	51.0%	15	135	3	12.7%	3	70
Hooper Bay	4E	1										
King Salmon	4E	7	3	42.9%	2	28.6%	0	0	1	14.3%	0	0
Koyuk	4E	1										
Naknek	4E	9	6	66.7%	4	40.7%	20	618	1	11.1%	1	19
Nightmute	4E	9	9	100.0%	9	100.0%	92	821	0	0.0%	0	0
Nome	4E	11	6	54.5%	3	27.3%	20	427	0	0.0%	0	0

Table 5.–Estimated subsistence harvests of halibut in Alaska in number of fish and pounds net (dressed, head off) weight, by regulatory area and subarea, 2020.

			Estimated subsistence harvest by gear type									Estimated sport harvest		
			Setline gear[a]			Hand-operated gear[a]			All gear					
Subarea	Regulatory area	Number of SHARCs subsistence fished[b]	Estimated number respondents fished[b]	Estimated number halibut harvested	Estimated pounds halibut harvested[c]	Estimated number respondents fished[b]	Estimated number halibut harvested	Estimated pounds halibut harvested[c]	Estimated number respondents fished[b]	Estimated number halibut harvested	Estimated pounds halibut harvested[c]	Estimated number respondents fished[b]	Estimated number halibut harvested	Estimated pounds halibut harvested[c]
Sitka LAMP Area	2C	617	556	2,674	66,438	150	423	7,671	617	3,096	74,087	266	730	12,784
Southern Southeast Alaska	2C	1,144	961	5,509	117,806	456	1,690	31,135	1,144	7,200	148,961	684	2,303	38,692
Northern Southeast Alaska	2C	534	465	2,826	57,897	142	463	9,159	534	3,291	67,089	230	853	15,991
	2C Total	**2,268**	**1,962**	**11,010**	**242,141**	**741**	**2,576**	**47,965**	**2,268**	**13,587**	**290,137**	**1,173**	**3,887**	**67,466**
Yakutat Area	3A	60	48	365	9,492	17	143	2,568	60	509	12,060	26	135	3,126
Prince William Sound	3A	261	219	1,438	26,031	120	549	9,447	261	1,985	35,449	115	261	5,190
Cook Inlet	3A	149	103	1,082	18,692	80	662	9,189	149	1,746	27,931	91	525	8,713
Kodiak Island–road system	3A	385	322	2,365	40,482	173	676	12,385	385	3,029	52,830	245	961	18,811
Kodiak Island–other	3A	345	276	1,967	37,422	141	651	11,386	345	2,627	48,724	203	843	16,803
	3A Total	**1,129**	**930**	**7,217**	**132,119**	**500**	**2,681**	**44,974**	**1,129**	**9,896**	**176,993**	**643**	**2,725**	**52,642**
Chignik Area	3B	7	6	50	778	4	3	68	7	53	845	2	7	110
Lower Alaska Peninsula	3B	141	81	479	6,980	70	254	5,975	141	732	13,016	28	76	1,199
	3B Total	**148**	**87**	**529**	**7,758**	**74**	**257**	**6,043**	**148**	**785**	**13,861**	**30**	**83**	**1,309**
Eastern Aleutians–East	4A	51	28	173	5,083	32	257	6,390	51	430	11,472	21	49	1,090
Eastern Aleutians–West	4A	5	5	39	646	0	0	0	5	39	646	8	83	1,278
	4A Total	**56**	**34**	**213**	**5,728**	**32**	**257**	**6,390**	**56**	**469**	**12,118**	**27**	**132**	**2,368**
Western Aleutians–East	4B	3	3	59	953	1	2	24	3	61	987	1	3	75
	4B Total	**3**	**3**	**59**	**953**	**1**	**2**	**24**	**3**	**61**	**987**	**1**	**3**	**75**
St Paul Island	4C	11	0	0	0	11	8	150	11	8	150	0	0	0
St George Island	4C	5	5	27	526	0	0	0	5	27	526	4	8	229
	4C Total	**16**	**5**	**27**	**526**	**11**	**8**	**150**	**16**	**35**	**676**	**4**	**8**	**229**
St Lawerence Island	4D	7	7	77	1,877	7	35	1,089	7	112	2,966	0	0	0
	4D Total	**7**	**7**	**77**	**1,877**	**7**	**35**	**1,089**	**7**	**112**	**2,966**	**0**	**0**	**0**
Bristol Bay	4E	23	22	22	572	14	14	174	23	36	747	2	0	0
Yukon–Kuskokwim Delta	4E	144	11	171	4,098	141	2,066	27,710	144	2,236	31,808	0	0	0
Norton Sound	4E	4	4	22	464	0	0	0	4	22	464	0	0	0
	4E Total	**171**	**36**	**215**	**5,134**	**155**	**2,079**	**27,884**	**171**	**2,294**	**33,019**	**2**	**0**	**0**
Grand total		**3,777**	**3,057**	**19,346**	**396,238**	**1,513**	**7,895**	**134,520**	**3,777**	**27,241**	**530,757**	**1,876**	**6,838**	**124,090**

Source Alaska Department of Fish and Game, Division of Subsistence, SHARC Survey, 2021.

a. Setline gear = longline or skate; hand-operated gear = rod and reel or handline.

b. Because they may fish in more than one area, subtotals for estimated number of respondents who fished for regulatory areas and the state total might exceed the sum of the subarea values.

c. Weights given are "net weight" (dressed, head off) = .75 of round (whole) weight.

Table 6.–Estimated subsistence harvests of halibut in Alaska, by geographic area fished, 2003–2012, 2014, 2016, and 2020.

	Subsistence halibut harvests, net weight (pounds)														Percent change between years		Percentage of state total										
Geographic area	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2014	2016	2018	2020	2018 to 2020[b]	13-year average to 2020	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2014	2016	2018
Southern Southeast Alaska	290,443	349,319	323,858	307,921	283,422	254,510	242,946	254,366	294,962	237,905	239,976	239,316	207,509	148,941	-28.2%	-44.3%	27.9%	31.0%	27.9%	27.4%	27.3%	28.7%	30.4%	31.9%	29.2%	34.6%	31.6%	32.9%	33.7%
Sitka LAMP Area	173,323	147,312	133,545	147,526	132,190	104,973	89,832	76,988	83,456	74,514	81,193	96,901	79,757	74,087	-7.1%	-52.2%	16.6%	12.5%	11.5%	13.1%	12.8%	11.8%	10.4%	9.7%	12.0%	10.8%	10.7%	13.3%	13.0%
Northern Southeast Alaska	159,772	160,453	135,869	124,670	109,286	98,877	105,139	93,464	99,470	83,624	101,802	100,247	78,948	67,089	-15.0%	-59.9%	15.3%	13.4%	11.5%	11.1%	10.6%	11.1%	12.2%	11.7%	14.3%	12.2%	13.4%	13.8%	12.8%
Subtotal, Area 2C	**623,538**	**677,084**	**593,072**	**580,117**	**524,897**	**458,360**	**456,997**	**424,818**	**386,967**	**396,043**	**422,971**	**436,464**	**366,214**	**290,137**	**-20.8%**	**-40.6%**	**59.9%**	**56.7%**	**50.8%**	**51.6%**	**50.8%**	**51.7%**	**53.1%**	**53.3%**	**55.5%**	**57.6%**	**55.6%**	**60.0%**	**59.5%**
Yakutat Area	11,198	20,153	36,515	19,187	17,516	16,084	14,390	18,064	15,762	20,113	12,082	23,096	16,327	12,060	-26.1%	-34.8%	1.1%	1.7%	3.1%	1.7%	1.7%	1.8%	1.7%	2.3%	2.3%	2.9%	1.6%	3.2%	2.7%
Prince William Sound	28,409	58,429	68,063	47,965	52,407	47,112	33,796	42,279	32,822	27,873	43,805	32,690	31,143	35,449	13.8%	-15.7%	2.7%	4.9%	5.8%	4.3%	5.1%	5.3%	3.9%	5.3%	4.7%	4.1%	5.8%	4.5%	5.1%
Cook Inlet	52,609	83,939	79,024	59,965	75,623	76,795	51,043	65,809	60,337	65,100	50,365	45,643	54,638	27,951	-19.4%	-56.3%	5.1%	7.0%	6.7%	5.3%	7.3%	8.7%	9.4%	8.3%	8.6%	9.5%	6.6%	6.3%	5.6%
Kodiak Island–road system	114,028	129,145	134,849	140,388	130,538	96,872	108,049	103,066	79,907	72,516	71,538	63,841	62,415	32,830	-15.4%	-47.5%	11.0%	10.8%	11.4%	12.5%	12.6%	10.9%	12.5%	12.9%	11.5%	10.6%	9.4%	8.8%	10.1%
Kodiak Island–other	79,256	111,844	110,824	111,752	96,206	100,540	91,202	83,432	77,276	67,914	65,578	57,184	43,174	48,724	12.9%	-42.1%	7.6%	9.4%	9.4%	9.9%	9.2%	11.3%	10.6%	10.5%	11.1%	9.9%	8.4%	7.9%	7.0%
Subtotal, Area 3A	**285,500**	**403,610**	**429,275**	**379,258**	**372,289**	**337,403**	**328,480**	**312,650**	**266,104**	**253,516**	**241,369**	**222,454**	**187,698**	**176,993**	**-5.7%**	**-42.8%**	**27.4%**	**33.8%**	**36.4%**	**33.7%**	**36.1%**	**38.0%**	**38.1%**	**39.2%**	**38.1%**	**36.9%**	**31.7%**	**30.6%**	**30.5%**
Chignik Area	10,500	12,053	14,783	17,780	15,397	11,842	5,889	5,857	3,621	2,795	1,577	1,730	1,183	845	-28.6%	-89.5%	1.0%	1.0%	1.3%	1.6%	1.5%	1.3%	0.7%	0.7%	0.5%	0.4%	0.2%	0.2%	0.2%
Lower Alaska Peninsula	16,977	21,467	31,442	30,767	32,351	30,406	19,603	17,152	18,390	13,164	11,801	12,492	15,461	13,016	-15.8%	-37.7%	1.6%	1.8%	2.7%	2.7%	3.1%	3.4%	2.3%	2.2%	2.6%	1.9%	1.6%	1.7%	2.5%
Subtotal, Area 3B	**27,477**	**33,519**	**46,225**	**48,547**	**47,748**	**42,248**	**25,492**	**23,009**	**22,011**	**15,959**	**13,378**	**14,242**	**16,644**	**13,861**	**-16.7%**	**-52.1%**	**2.6%**	**2.8%**	**3.9%**	**4.3%**	**4.6%**	**4.8%**	**3.0%**	**2.9%**	**3.2%**	**2.3%**	**1.8%**	**2.0%**	**2.7%**
Eastern Aleutians–east	19,345	26,715	33,882	25,993	12,753	19,043	33,090	13,343	12,816	9,061	7,647	7,429	12,438	11,472	-7.8%	-36.1%	1.9%	2.2%	2.9%	2.3%	1.2%	2.1%	3.8%	1.7%	1.8%	1.3%	1.0%	1.0%	2.0%
Eastern Aleutians–west	1,852	2,162	1,734	1,069	2,193	509	409	1,205	790	482	80	626	799	646	-19.2%	-59.7%	0.2%	0.2%	0.1%	0.1%	0.2%	0.1%	0.0%	0.2%	0.1%	0.1%	0.0%	0.1%	0.1%
Subtotal, Area 4A	**21,197**	**28,877**	**35,615**	**27,062**	**14,946**	**19,553**	**33,499**	**14,548**	**13,606**	**9,543**	**7,727**	**8,054**	**13,237**	**12,118**	**-8.5%**	**-36.3%**	**2.0%**	**2.4%**	**3.0%**	**2.4%**	**1.4%**	**2.2%**	**3.9%**	**1.8%**	**2.0%**	**1.4%**	**1.0%**	**1.1%**	**2.1%**
Western Aleutians–east	2,582	916	1,351	2,761	1,997	4,737	1,175	450	537	1,698	254	294	1,684	987	-41.4%	-57.2%	0.2%	0.1%	0.1%	0.2%	0.2%	0.5%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%
Subtotal, Area 4B	**2,582**	**916**	**1,351**	**2,761**	**1,997**	**4,737**	**1,175**	**450**	**537**	**1,698**	**254**	**294**	**1,684**	**987**	**-41.4%**	**-57.2%**	**0.2%**	**0.1%**	**0.1%**	**0.2%**	**0.2%**	**0.5%**	**0.1%**	**0.1%**	**0.1%**	**0.2%**	**0.0%**	**0.0%**	**0.3%**
St. George Island	2,042	1,823	2,145	3,443	3,736	1,150	700	720	490	0	0	370	401	526	31.2%	-59.8%	0.2%	0.2%	0.2%	0.3%	0.4%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%
St. Paul Island	20,839	7,911	5,571	5,085	11,342	4,507	5,623	10,139	1,158	1,176	3,389	3,930	4,751	150	-96.8%	-97.7%	2.0%	0.7%	0.5%	0.5%	1.1%	0.5%	0.7%	1.3%	0.2%	0.2%	0.4%	0.5%	0.5%
Subtotal, Area 4C	**22,881**	**9,734**	**7,716**	**8,527**	**15,077**	**5,657**	**6,323**	**10,859**	**1,648**	**1,176**	**3,389**	**4,300**	**5,152**	**676**	**-86.9%**	**-91.4%**	**2.2%**	**0.8%**	**0.7%**	**0.8%**	**1.5%**	**0.6%**	**0.7%**	**1.4%**	**0.2%**	**0.2%**	**0.4%**	**0.6%**	**0.8%**
St. Lawrence Island	4,380	10,923	5,848	8,297	3,204	3,131	644	1,171	615	672	54	0	0	2,966	100.0%	-1.0%	0.4%	0.9%	0.5%	0.7%	0.3%	0.4%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%
Subtotal, Area 4D	**4,380**	**10,923**	**5,848**	**8,297**	**3,204**	**3,131**	**644**	**1,171**	**615**	**672**	**54**	**0**	**0**	**2,966**	**100.0%**	**-1.0%**	**0.4%**	**0.9%**	**0.5%**	**0.7%**	**0.3%**	**0.4%**	**0.1%**	**0.1%**	**0.1%**	**0.1%**	**0.0%**	**0.0%**	**0.0%**
Bristol Bay	435	203	2,169	1,336	2,116	54	0	0	403	329	1,160	496	2,622	747	-71.5%	-14.5%	0.0%	0.0%	0.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.2%	0.1%	0.4%
Yukon–Kuskokwim Delta	53,284	28,298	51,950	69,407	50,019	14,669	7,468	9,484	5,283	7,239	69,765	39,551	22,088	31,808	44.0%	-5.5%	5.1%	2.4%	4.4%	6.2%	4.8%	1.7%	0.9%	1.2%	0.8%	1.1%	9.2%	5.4%	3.6%
Norton Sound	56	0	0	0	0	1,145	1,281	571	482	816	403	1,522	450	464	3.1%	-10.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.2%	0.1%
Subtotal, Area 4E	**53,775**	**28,501**	**54,119**	**70,743**	**52,135**	**15,898**	**8,749**	**10,055**	**6,168**	**8,384**	**71,327**	**41,370**	**25,160**	**33,019**	**31.2%**	**-3.8%**	**5.2%**	**2.4%**	**4.6%**	**6.3%**	**5.1%**	**1.8%**	**1.0%**	**1.3%**	**0.9%**	**1.2%**	**9.4%**	**5.7%**	**4.1%**
Total[a]	**1,041,330**	**1,193,162**	**1,178,222**	**1,125,312**	**1,032,293**	**886,988**	**861,359**	**797,560**	**697,656**	**686,991**	**760,469**	**727,178**	**615,789**	**530,757**	**-15.8%**	**-40.5%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: ADF&G Division of Subsistence SHARC surveys, 2004–2013, 2015, 2017, 2019, and 2021.

a. The sum of the harvests by geographic areas for 2003 reported here differs slightly from that reported in Table 8 in Fall et al. (2004:50) due to rounding.

Table 7.–Number of hooks usually fished, setline (stationary) gear, Alaska halibut subsistence fishery, 2020.

Regulatory area	SHARC holders		Number of hooks[b]																															
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Missing	Total[a]
2C	No.	5,039	3	10	9	2	3	5	0	7	0	56	2	26	14	9	368	6	0	6	2	263	1	2	6	17	141	26	10	121	32	782	46	1,975
	Pct.		0.1	0.5	0.5	0.1	0.2	0.3	0.0	0.4	0.0	2.8	0.1	1.3	0.7	0.4	18.6	0.3	0.0	0.3	0.1	13.3	0.1	0.1	0.3	0.8	7.1	1.3	0.5	6.1	1.6	39.6	2.3	
3A	No.	2,183	8	9	3	0	7	10	0	6	3	36	0	12	0	0	44	3	0	6	2	143	0	3	5	2	85	7	5	32	13	459	9	911
	Pct.		0.9	1.0	0.3	0.0	0.8	1.1	0.0	0.7	0.3	4.0	0.0	1.3	0.0	0.0	4.9	0.3	0.0	0.7	0.2	15.7	0.0	0.3	0.6	0.2	9.3	0.8	0.5	3.5	1.5	50.3	1.0	
3B	No.	420	4	0	4	0	0	0	0	0	0	7	0	1	0	0	0	0	0	0	0	20	0	0	0	0	3	0	0	0	0	43	9	93
	Pct.		4.7	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0	8.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	22.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0	46.1	9.9	
4A	No.	162	7	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	0	2	0	0	0	0	18	0	32
	Pct.		20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	10.5	0.0	0.0	0.0	0.0	6.7	0.0	0.0	0.0	0.0	55.4	0.0	
4B	No.	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	3
	Pct.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	66.7	0.0	
4C	No.	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
	Pct.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	
4D	No.	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7
	Pct.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	
4E	No.	277	0	0	0	2	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	6	0	0	0	0	1	0	0	1	0	14	8	34
	Pct.		0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0	0.0	3.9	0.0	0.0	0.0	0.0	17.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	3.9	0.0	41.6	22.0	
Alaska	No.	8,135	22	19	16	4	10	15	0	13	3	101	2	39	14	9	415	8	0	12	4	436	1	4	11	18	232	33	15	154	46	1,327	72	3,057
	Pct.		0.7	0.6	0.5	0.1	0.3	0.5	0.0	0.4	0.1	3.3	0.1	1.3	0.5	0.3	13.6	0.3	0.0	0.4	0.1	14.3	0.0	0.1	0.4	0.6	7.6	1.1	0.5	5.0	1.5	43.4	2.4	

Source ADF&G Division of Subsistence, SHARC surveys, 2020.

a. Number of fishers using setline (fixed) gear. Based on location of tribe or rural community of SHARC holder.

b. The column for 30 hooks includes those fishers who reported using more than 30. There is no 30-hook limit in Areas 4C, 4D, or 4E.

Table 8.–Average net weight of subsistence and sport halibut harvests, by regulatory area fished, 2020.

	Subsistence methods			Sport harvest[a]			Total halibut		
Area[b]	Number	Net weight (lb)	Average per fish	Number	Net weight (lb)	Average per fish	Number	Net weight (lb)	Average per fish
2C	13,587	290,137	21.4	3,887	67,466	17.4	17,474	357,603	20.5
3A	9,896	176,993	17.9	2,725	52,642	19.3	12,621	229,635	18.2
3B	785	13,861	17.7	83	1,309	15.8	868	15,170	17.5
4A	469	12,118	25.8	132	2,368	18.0	601	14,486	24.1
4B	61	987	16.1	3	75	25.0	64	1,062	16.5
4C	35	676	19.5	8	229	28.1	43	906	21.2
4D	112	2,966	26.5	0	0	0.0	112	2,966	26.5
4E	2,294	33,019	14.4	0	0	0.0	2,294	33,019	14.4
Alaska	**27,241**	**530,757**	**19.5**	**6,838**	**124,090**	**18.1**	**34,079**	**654,847**	**19.2**

Source ADF&G Division of Subsistence, SHARC survey, 2021.

a. Sport harvest of halibut by SHARC holders.

b. Area totals are based on the location of the harvest (see also tables 5 and 6).

Table 9.–Rural and Tribal SHARC holder responses to why needs were not met, by regulatory area, 2020.

					Needs Met							
			SHARCs returned		Valid responses		Yes		No		SHARCs poviding valid reason	
SHARC type	Regulatory area	SHARCS issued	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.	No.	Pct.
Rural	2C	3,677	2,659	72.3%	2,604	97.9%	1,394	53.5%	1,210	46.5%	1,052	86.9%
Rural	3A	1,638	1,114	68.0%	1,092	98.0%	693	63.5%	399	36.5%	356	89.2%
Rural	3B	25	18	72.0%	18	100.0%	7	38.9%	11	61.1%	9	81.8%
Rural	4A	93	44	47.3%	43	97.7%	11	25.6%	32	74.4%	30	93.8%
Rural	4B	4	4	100.0%	4	100.0%	0	0.0%	4	100.0%	4	100.0%
Rural	4C	8	1	12.5%	1	100.0%	0	0.0%	1	100.0%	1	100.0%
Rural	4D	14	2	14.3%	2	100.0%	2	100.0%	0	0.0%	0	0.0%
Rural	4E	67	49	73.1%	47	95.9%	14	29.8%	33	70.2%	30	90.9%
Rural subtotal		**5,526**	**3,891**	**70.4%**	**3,811**	**97.9%**	**2,121**	**55.7%**	**1,690**	**44.3%**	**1,482**	**87.7%**
Tribal	2C	1,362	720	52.9%	703	97.6%	218	31.0%	485	69.0%	389	80.2%
Tribal	3A	545	296	54.3%	292	98.6%	121	41.4%	171	58.6%	129	75.4%
Tribal	3B	395	117	29.6%	109	93.2%	35	32.1%	74	67.9%	56	75.7%
Tribal	4A	69	12	17.4%	12	100.0%	5	41.7%	7	58.3%	7	100.0%
Tribal	4B	2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tribal	4C	24	4	16.7%	4	100.0%	2	50.0%	2	50.0%	0	0.0%
Tribal	4D	2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tribal	4E	210	88	41.9%	84	95.5%	44	52.4%	40	47.6%	37	92.5%
Tribal subtotal		**2,609**	**1,237**	**47.4%**	**1,204**	**97.3%**	**425**	**35.3%**	**779**	**64.7%**	**618**	**79.3%**
Total		**8,135**	**5,128**	**63.0%**	**5,015**	**97.8%**	**2,546**	**50.8%**	**2,469**	**49.2%**	**2,100**	**85.1%**

Source ADFG Division of Subsistence, SHARC surveys, 2021.

Table 10.–Reasons rural SHARC holders reported needs not met by regulatory area, 2020.

SHARC type	Regulatory area	SHARCs reporting needs not met	Family/ personal		Resources less available		Too far to travel		Lack of equipment		Less sharing		Lack of effort		Unsuccessful		Weather/ environment	
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Rural	2C	1,210	237	19.6%	52	4.3%	6	0.5%	148	12.2%	4	0.3%	251	20.7%	141	11.7%	110	9.1%
Rural	3A	399	81	20.3%	9	2.3%	1	0.3%	54	13.5%	2	0.5%	80	20.1%	26	6.5%	25	6.3%
Rural	3B	11	2	18.2%	3	27.3%	0	0.0%	1	9.1%	0	0.0%	3	27.3%	0	0.0%	1	9.1%
Rural	4A	32	3	9.4%	0	0.0%	1	3.1%	14	43.8%	0	0.0%	2	6.3%	2	6.3%	2	6.3%
Rural	4B	4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Rural	4C	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Rural	4D	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Rural	4E	33	3	9.1%	7	21.2%	1	3.0%	3	9.1%	1	3.0%	6	18.2%	4	12.1%	7	21.2%
Total		**1,690**	**326**	**19.3%**	**71**	**4.2%**	**9**	**0.5%**	**220**	**13.0%**	**7**	**0.4%**	**342**	**20.2%**	**173**	**10.2%**	**145**	**8.6%**

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Table 10.–Continued.

SHARC type	Regulatory area	SHARCs reporting needs not met	Working/ no time		Regulations		Fish were too small or diseased		Equipment/fuel expense		Did not get enough		Competition		COVID19		Other reasons	
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Rural	2C	1,210	132	10.9%	15	1.2%	7	0.6%	22	1.8%	3	0.2%	16	1.3%	127	10.5%	5	0.4%
Rural	3A	399	54	13.5%	7	1.8%	3	0.8%	8	2.0%	1	0.3%	1	0.3%	54	13.5%	0	0.0%
Rural	3B	11	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	9.1%	0	0.0%
Rural	4A	32	4	12.5%	0	0.0%	2	6.3%	0	0.0%	0	0.0%	0	0.0%	5	15.6%	0	0.0%
Rural	4B	4	0	0.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	75.0%	0	0.0%
Rural	4C	1	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	100.0%	0	0.0%
Rural	4D	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Rural	4E	33	3	9.1%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	4	12.1%	2	6.1%	0	0.0%
Total		**1,690**	**193**	**11.4%**	**23**	**1.4%**	**12**	**0.7%**	**30**	**1.8%**	**4**	**0.2%**	**21**	**1.2%**	**193**	**11.4%**	**5**	**0.3%**

Source ADFG Division of Subsistence, SHARC surveys, 2021.

Table 11.–Reasons tribal SHARC holders reported needs not met by regulatory area, 2020.

SHARC type	Regulatory area	SHARCs reporting needs not met	Family/ personal		Resources less available		Too far to travel		Lack of equipment		Less sharing		Lack of effort		Unsuccessful		Weather/ environment	
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Tribal	2C	485	77	15.9%	8	1.6%	6	1.2%	121	24.9%	2	0.4%	55	11.3%	22	4.5%	35	7.2%
Tribal	3A	171	30	17.5%	8	4.7%	0	0.0%	32	18.7%	0	0.0%	18	10.5%	6	3.5%	13	7.6%
Tribal	3B	74	5	6.8%	9	12.2%	2	2.7%	9	12.2%	1	1.4%	9	12.2%	1	1.4%	5	6.8%
Tribal	4A	7	0	0.0%	3	42.9%	0	0.0%	2	28.6%	0	0.0%	0	0.0%	1	14.3%	0	0.0%
Tribal	4B	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tribal	4C	2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tribal	4D	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tribal	4E	40	2	5.0%	7	17.5%	0	0.0%	6	15.0%	1	2.5%	8	20.0%	4	10.0%	8	20.0%
Total		**779**	**114**	**14.6%**	**35**	**4.5%**	**8**	**1.0%**	**170**	**21.8%**	**4**	**0.5%**	**90**	**11.6%**	**34**	**4.4%**	**61**	**7.8%**

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Table 11.–Continued.

SHARC type	Regulatory area	SHARCs reporting needs not met	Working/ no time		Regulations		Fish were too small or diseased		Equipment/fuel expense		Did not get enough		Competition		COVID19		Other reasons	
			Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Tribal	2C	485	31	6.4%	10	2.1%	4	0.8%	16	3.3%	3	0.6%	3	0.6%	67	13.8%	7	1.4%
Tribal	3A	171	11	6.4%	6	3.5%	1	0.6%	2	1.2%	0	0.0%	1	0.6%	24	14.0%	1	0.6%
Tribal	3B	74	6	8.1%	2	2.7%	0	0.0%	3	4.1%	2	2.7%	0	0.0%	11	14.9%	0	0.0%
Tribal	4A	7	0	0.0%	1	14.3%	1	14.3%	0	0.0%	0	0.0%	2	28.6%	0	0.0%	0	0.0%
Tribal	4B	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tribal	4C	2	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tribal	4D	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Tribal	4E	40	2	5.0%	0	0.0%	0	0.0%	1	2.5%	1	2.5%	1	2.5%	0	0.0%	1	2.5%
Total		**779**	**50**	**6.4%**	**19**	**2.4%**	**6**	**0.8%**	**22**	**2.8%**	**6**	**0.8%**	**7**	**0.9%**	**102**	**13.1%**	**9**	**1.2%**

Source ADFG Division of Subsistence, SHARC surveys, 2021.

Table 12.–Reasons SHARC holders reported needs not met, by regulatory area, 2020.

Regulatory Area	SHARCs reporting reasons needs not met	Family/ personal		Resources less available		Too far to travel		Lack of equipment		Less sharing		Lack of effort		Unsuccessful		Weather/ environment	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
2C	1,695	314	18.5%	60	3.5%	12	0.7%	269	15.9%	6	0.4%	306	18.1%	163	9.6%	145	8.6%
3A	570	111	19.5%	17	3.0%	1	0.2%	86	15.1%	2	0.4%	98	17.2%	32	5.6%	38	6.7%
3B	85	7	8.2%	12	14.1%	2	2.4%	10	11.8%	1	1.2%	12	14.1%	1	1.2%	6	7.1%
4A	39	3	7.7%	3	7.7%	1	2.6%	16	41.0%	0	0.0%	2	5.1%	3	7.7%	2	5.1%
4B	4	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4C	3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4D	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4E	73	5	6.8%	14	19.2%	1	1.4%	9	12.3%	2	2.7%	14	19.2%	8	11.0%	15	20.5%
Total	**2,469**	**440**	**17.8%**	**106**	**4.3%**	**17**	**0.7%**	**390**	**15.8%**	**11**	**0.4%**	**432**	**17.5%**	**207**	**8.4%**	**206**	**8.3%**

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Table 12.–Continued.

Regulatory Area	SHARCs reporting reasons needs not met	Working/ no time		Regulations		Fish were too small or diseased		Equipment / fuel expense		Did not get enough		Competition		COVID19		Other reasons	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
2C	1,695	163	9.6%	25	1.5%	11	0.6%	38	2.2%	6	0.4%	19	1.1%	194	11.4%	12	0.7%
3A	570	65	11.4%	13	2.3%	4	0.7%	10	1.8%	1	0.2%	2	0.4%	78	13.7%	1	0.2%
3B	85	6	7.1%	2	2.4%	0	0.0%	3	3.5%	2	2.4%	0	0.0%	12	14.1%	0	0.0%
4A	39	4	10.3%	1	2.6%	3	7.7%	0	0.0%	0	0.0%	2	5.1%	5	12.8%	0	0.0%
4B	4	0	0.0%	1	25.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	75.0%	0	0.0%
4C	3	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	33.3%	0	0.0%
4D	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4E	73	5	6.8%	0	0.0%	0	0.0%	1	1.4%	1	1.4%	5	6.8%	2	2.7%	1	1.4%
Total	**2,469**	**243**	**9.8%**	**42**	**1.7%**	**18**	**0.7%**	**52**	**2.1%**	**10**	**0.4%**	**28**	**1.1%**	**295**	**11.9%**	**14**	**0.6%**

Source ADFG Division of Subsistence, SHARC surveys, 2021

Table 13.–Estimated harvests of halibut by gear type and participation, subsistence and sport fisheries, selected Alaska communities, 2003–2012, 2014, 2016, and 2020.

Rural community[a]	Year	Number of SHARC holders[b]	Subsistence harvests: Setline (fixed) gear: Estimated number fished	Setline (fixed) gear: Estimated pounds harvested	Hand-operated gear: Estimated number fished	Hand-operated gear: Estimated pounds harvested	Total subsistence: Estimated number fished	Total subsistence: Estimated pounds harvested	Sport harvest[d]: Estimated number fished	Sport harvest[d]: Estimated pounds harvested	All harvests: Estimated number fished	All harvests: Estimated pounds harvested
Akutan	2003	50	7	231	36	9,381	39	9,612	12	450	42	10,062
	2004	50	0	0	36	11,239	36	11,239	9	945	41	12,184
	2005	49	11	1,242	42	13,769	47	15,011	17	273	47	15,284
	2006	47	5	1,008	38	11,404	38	12,412	5	367	38	12,779
	2007	46	3	431	16	3,173	16	3,603	0	0	16	3,603
	2008	17	7	2,186	11	3,843	13	6,029	3	1,834	13	7,863
	2009	17	5	1,733	7	1,260	9	2,993	0	0	9	2,993
	2010	16	3	147	9	1,512	9	1,659	0	0	9	1,659
	2011	16	4	630	7	945	7	1,575	0	0	7	1,575
	2012	6	0	0	0	0	0	0	0	0	0	0
	2014	5										
	2016	6	2	350	2	560	3	910	0	0	3	910
	2018	49	18	1,395	21	2,578	21	3,973	7	204	24	4,177
	2020	50	10	3,146	10	3,311	16	6,458	1	113	17	6,570
Cordova	2003	358	68	7,613	40	7,885	102	15,498	144	11,534	194	27,032
	2004	526	174	29,693	97	10,946	262	40,640	174	12,149	325	52,789
	2005	602	238	34,907	104	12,234	281	47,141	179	10,519	358	57,660
	2006	607	202	21,059	125	7,968	248	29,027	152	7,020	301	36,047
	2007	615	233	21,683	128	7,033	282	28,716	123	4,203	315	32,919
	2008	587	231	22,301	95	5,246	254	27,547	126	5,562	292	33,109
	2009	599	201	17,766	103	5,598	234	23,364	118	3,868	269	27,232
	2010	557	207	22,579	121	5,849	235	28,428	106	5,837	261	34,265
	2011	529	175	17,023	79	4,765	198	21,789	175	3,029	228	24,818
	2012	470	185	16,105	75	3,312	202	19,417	95	3,017	227	22,434
	2014	450	175	21,346	97	9,858	197	31,204	95	4,827	242	36,031
	2016	426	168	19,788	96	6,513	198	26,301	106	4,236	245	30,537
	2018	441	184	20,449	74	6,052	215	26,501	97	5,827	262	32,327
	2020	444	192	22,672	112	7,824	226	30,496	107	4,728	259	35,224
Hooper Bay	2003	94	10	281	16	506	33	788	2	0	36	788
	2004	94	3	338	18	968	24	1,305	0	0	24	1,305

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Table 13.–Page 2 of 6.

Rural community[a]	Year	Number of SHARC holders[b]	Subsistence harvests: Setline (fixed) gear: Estimated number fished	Setline (fixed) gear: Estimated pounds harvested	Hand-operated gear: Estimated number fished	Hand-operated gear: Estimated pounds harvested	Total subsistence: Estimated number fished	Total subsistence: Estimated pounds harvested	Sport harvest[d]: Estimated number fished	Sport harvest[d]: Estimated pounds harvested	All harvests: Estimated number fished	All harvests: Estimated pounds harvested
	2005	93	5	58	31	3,493	34	3,550	2	58	34	3,608
	2006	89	5	121	16	526	18	647	0	0	18	647
	2007	89	1	77	25	3,227	25	3,304	1	60	25	3,363
	2008	17	3	820	5	933	5	1,753	2	300	5	2,053
	2009	17	4	672	11	515	11	1,187	3	112	11	1,299
	2010	14	0	0	5	345	5	345	0	0	5	345
	2011	14	0	0	3	121	3	121	0	0	3	121
	2012	0	0	0	0	0	0	0	0	0	0	0
	2014	0	0	0	0	0	0	0	0	0	0	0
	2016	0	0	0	0	0	0	0	0	0	0	0
	2018	36	0	0	9	778	9	778	0	0	9	778
	2020	7	1	0	6	180	7	180	0	0	7	180
Kodiak	2003	1,320	438	101,575	278	51,678	646	153,254	498	68,170	858	221,424
	2004	1,561	554	131,719	335	55,605	802	187,214	581	73,181	971	260,395
	2005	1,741	650	146,781	398	64,047	871	210,828	669	82,455	1,116	293,283
	2006	1,716	684	142,326	497	63,496	961	205,822	562	64,320	1,092	270,142
	2007	1,880	707	135,351	486	58,282	945	193,633	648	68,556	1,157	262,189
	2008	1,725	763	128,226	479	49,108	963	177,334	693	72,915	1,213	250,249
	2009	1,826	749	130,802	433	46,966	923	177,769	619	64,034	1,139	241,803
	2010	1,702	747	127,816	374	36,275	900	164,092	539	47,646	1,074	211,738
	2011	1,660	686	106,609	378	31,739	837	138,348	513	45,725	1,009	184,073
	2012	1,503	619	93,417	345	32,403	769	125,820	499	44,041	967	169,861
	2014	1,375	653	89,773	321	28,350	763	118,123	460	31,744	943	149,867
	2016	1,180	548	86,565	250	21,563	627	108,127	439	35,883	810	144,010
	2018	1,144	572	81,180	216	13,785	628	94,965	375	23,310	760	118,275
	2020	1,072	502	69,481	241	20,346	577	89,827	372	33,390	734	123,217
Nightmute	2003	29	2	270	18	6,364	18	6,634	0	0	18	6,634
	2004	29	0	0	12	662	12	662	0	0	12	662

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Table 13.–Page 3 of 6.

Rural community[a]	Year	Number of SHARC holders[b]	Subsistence harvests: Setline (fixed) gear: Estimated number fished	Setline (fixed) gear: Estimated pounds harvested	Hand-operated gear: Estimated number fished	Hand-operated gear: Estimated pounds harvested	Total subsistence: Estimated number fished	Total subsistence: Estimated pounds harvested	Sport harvest[d]: Estimated number fished	Sport harvest[d]: Estimated pounds harvested	All harvests: Estimated number fished	All harvests: Estimated pounds harvested
	2005	31	4	456	21	4,232	23	4,688	0	0	23	4,688
	2006	15	2	3,500	9	746	11	4,246	0	0	11	4,246
	2007	15	4	210	8	1,432	10	1,642	0	0	10	1,642
	2008	8	1	105	1	63	2	168	0	0	2	168
	2009	7	1	63	1	63	1	126	0	0	1	126
	2010	2										
	2011	2										
	2012	1										
	2014	0	0	0	0	0	0	0	0	0	0	0
	2016	0	0	0	0	0	0	0	0	0	0	0
	2018	0	0	0	0	0	0	0	0	0	0	0
	2020	27	0	0	27	7,669	27	7,669	0	0	27	7,669
Petersburg	2003	1,047	330	41,704	138	14,013	415	55,718	268	19,611	523	75,329
	2004	1,187	322	53,885	206	17,900	482	71,784	351	26,408	617	98,192
	2005	1,197	338	44,050	175	17,321	436	61,372	312	23,289	569	84,661
	2006	1,082	300	35,608	222	18,075	426	53,682	246	17,351	529	71,033
	2007	1,123	274	32,026	191	15,491	386	47,517	264	15,177	516	62,694
	2008	985	285	31,077	207	15,523	393	46,600	279	17,506	515	64,106
	2009	1,041	323	30,105	224	16,661	418	46,766	247	13,619	513	60,385
	2010	961	323	33,951	209	13,315	409	47,266	256	13,251	501	60,517
	2011	976	271	27,775	194	12,312	370	40,087	209	13,096	459	53,183
	2012	917	315	34,066	175	10,845	383	44,912	263	14,936	510	59,848
	2014	863	289	34,161	189	14,214	375	48,375	242	16,021	495	64,396
	2016	788	255	32,167	145	11,870	338	44,037	227	14,414	453	58,451
	2018	803	263	29,808	153	10,360	327	40,168	214	12,552	433	52,720
	2020	776	279	29,675	158	11,177	355	40,852	192	10,916	452	51,769
Port Graham	2003	52	10	4,398	28	7,056	35	11,454	3	156	36	11,610
	2004	57	15	4,425	31	4,755	42	9,181	11	850	42	10,031

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Table 13.–Page 4 of 6.

Rural community[a]	Year	Number of SHARC holders[b]	Subsistence harvests: Setline (fixed) gear: Estimated number fished	Setline (fixed) gear: Estimated pounds harvested	Hand-operated gear: Estimated number fished	Hand-operated gear: Estimated pounds harvested	Total subsistence: Estimated number fished	Total subsistence: Estimated pounds harvested	Sport harvest[d]: Estimated number fished	Sport harvest[d]: Estimated pounds harvested	All harvests: Estimated number fished	All harvests: Estimated pounds harvested
	2005	52	8	7,938	18	3,190	18	11,127	9	488	18	11,615
	2006	50	9	2,397	24	3,797	30	6,194	2	0	30	6,194
	2007	59	22	5,347	28	3,146	36	8,493	4	233	36	8,726
	2008	48	13	6,896	23	2,200	30	9,097	2	51	30	9,148
	2009	47	22	1,454	31	4,973	35	6,426	9	197	35	6,623
	2010	47	23	5,011	18	2,211	30	7,222	5	267	30	7,489
	2011	46	13	2,569	9	1,059	15	3,638	0	0	15	3,638
	2012	32	10	1,677	11	1,783	18	3,460	5	44	19	3,503
	2014	34	12	1,935	9	650	15	2,585	5	155	17	2,739
	2016	34	14	7,964	16	1,548	23	9,512	7	469	23	9,981
	2018	37	14	1,028	13	718	19	1,746	6	300	19	2,046
	2020	35	18	1,856	9	1,096	22	2,952	1	14	22	2,966
Sand Point	2003	73	15	3,409	11	1,410	21	4,819	11	410	21	5,229
	2004	351	25	4,360	74	6,996	109	11,355	50	1,384	121	12,739
	2005	321	35	12,201	77	9,700	100	21,901	23	1,281	105	23,182
	2006	365	59	7,406	87	12,809	133	20,214	29	6,300	140	26,514
	2007	364	49	13,278	113	11,337	138	24,615	16	3,034	138	27,649
	2008	342	71	15,766	88	9,247	130	25,013	19	2,195	132	27,208
	2009	137	28	3,987	58	7,772	70	11,759	19	2,665	70	14,424
	2010	130	22	3,408	50	3,898	61	7,306	18	1,129	67	8,435
	2011	136	51	7,358	74	6,039	85	13,397	23	1,243	87	14,640
	2012	136	30	3,401	46	2,307	61	5,708	32	1,280	75	6,989
	2014	139	33	4,046	37	2,341	64	6,387	3	0	64	6,387
	2016	303	38	1,218	93	6,468	108	7,686	4	324	108	8,010
	2018	243	52	3,289	70	6,345	91	9,634	4	132	91	9,766
	2020	321	63	5,954	51	3,340	108	9,293	22	1,055	123	10,348
Sitka	2003	1,639	760	155,276	160	19,604	821	174,880	401	32,408	956	207,288
	2004	1,871	714	151,660	147	14,739	904	166,474	412	25,829	1,026	192,303

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Table 13.–Page 5 of 6.

Rural community[a]	Year	Number of SHARC holders[b]	Subsistence harvests: Setline (fixed) gear: Estimated number fished	Setline (fixed) gear: Estimated pounds harvested	Hand-operated gear: Estimated number fished	Hand-operated gear: Estimated pounds harvested	Total subsistence: Estimated number fished	Total subsistence: Estimated pounds harvested	Sport harvest[d]: Estimated number fished	Sport harvest[d]: Estimated pounds harvested	All harvests: Estimated number fished	All harvests: Estimated pounds harvested
	2005	1,974	738	126,426	172	19,893	814	146,319	417	55,913	987	202,232
	2006	1,895	809	145,542	297	17,830	915	163,372	395	23,032	1,036	186,404
	2007	1,954	839	115,162	270	26,886	921	142,049	315	16,200	1,010	158,249
	2008	1,662	784	96,314	232	13,266	845	109,581	307	13,055	932	122,636
	2009	1,731	774	86,219	265	11,205	844	97,424	265	10,516	941	107,940
	2010	1,635	700	74,394	218	8,334	755	82,728	228	9,257	849	91,985
	2011	1,658	739	84,426	159	8,604	784	93,030	249	8,336	867	101,366
	2012	1,570	659	71,261	168	7,445	697	78,706	237	9,096	799	87,802
	2014	1,530	600	81,452	182	9,657	644	91,109	262	14,900	769	106,009
	2016	1,337	635	98,185	184	9,404	688	107,589	235	13,433	783	121,022
	2018	1,272	602	76,592	178	8,238	650	84,830	246	13,590	750	98,420
	2020	1,272	551	65,127	142	7,543	611	72,671	280	15,374	755	88,044
Toksook Bay	2003	532	8	3,790	47	20,709	54	24,500	0	0	54	24,500
	2004	529	7	859	44	5,737	56	6,596	0	0	56	6,596
	2005	522	5	602	60	14,269	61	14,870	2	98	62	14,968
	2006	533	6	2,333	112	34,149	113	36,481	0	0	113	36,481
	2007	533	17	1,451	100	6,469	112	7,921	0	0	112	7,921
	2008	34	6	707	8	1,436	9	2,143	0	0	9	2,143
	2009	33	3	266	10	789	10	1,055	0	0	10	1,055
	2010	32	5	315	10	560	10	875	0	0	10	875
	2011	32	2	378	7	219	8	597	0	0	8	597
	2012	7	1	140	4	154	5	294	0	0	5	294
	2014	115	0	0	121	32,023	121	32,023	0	0	121	32,023
	2016	104	5	284	95	25,077	98	25,361	5	732	98	26,093
	2018	55	4	982	39	5,911	39	6,892	4	324	39	7,216
	2020	38	0	0	20	1,760	20	1,760	0	0	20	1,760
Tununak	2003	0										
	2004	70	16	878	23	1,076	31	1,954	0	0	31	1,954

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Table 13.–Page 6 of 6.

Rural community[a]	Year	Number of SHARC holders[b]	Subsistence harvests: Setline (fixed) gear: Estimated number fished	Setline (fixed) gear: Estimated pounds harvested	Hand-operated gear: Estimated number fished	Hand-operated gear: Estimated pounds harvested	Total subsistence: Estimated number fished	Total subsistence: Estimated pounds harvested	Sport harvest[d]: Estimated number fished	Sport harvest[d]: Estimated pounds harvested	All harvests: Estimated number fished	All harvests: Estimated pounds harvested
	2005	70	3	332	18	2,329	20	2,661	0	0	20	2,661
	2006	70	7	224	33	3,808	33	4,032	0	0	33	4,032
	2007	69	14	1,536	38	5,479	38	7,015	0	0	38	7,015
	2008	68	0	0	8	1,296	8	1,296	0	0	8	1,296
	2009	11	0	0	7	488	7	488	0	0	7	488
	2010	11	0	0	9	576	9	576	0	0	9	576
	2011	11	0	0	4	84	4	84	0	0	4	84
	2012	11	0	0	3	173	3	173	0	0	3	173
	2014	81	7	3,710	80	24,241	82	27,951	0	0	82	27,951
	2016	65	5	35	65	10,965	65	11,000	0	0	65	11,000
	2018	74	1	0	74	10,692	74	10,692	0	0	74	10,692
	2020	98	7	986	82	20,108	82	21,094	0	0	82	21,094
Unalaska[c]	2003	92	39	6,713	31	4,146	50	10,860	33	5,519	70	16,379
	2004	131	43	9,557	39	5,973	81	15,530	34	2,165	93	17,695
	2005	150	60	9,573	57	8,535	88	18,108	28	2,439	97	20,547
	2006	171	53	7,526	47	8,805	81	16,331	50	3,768	101	20,100
	2007	176	67	9,012	38	4,238	83	13,250	33	2,287	92	15,537
	2008	173	59	7,293	42	6,417	87	13,710	43	2,962	101	16,672
	2009	164	56	19,204	54	10,102	76	29,306	45	1,861	98	31,167
	2010	155	58	7,417	60	5,663	92	13,081	54	2,730	103	15,811
	2011	141	33	4,449	50	7,808	65	12,257	27	3,030	75	15,287
	2012	141	41	5,342	41	4,717	62	10,059	44	4,221	83	14,280
	2014	159	57	6,277	48	2,610	74	8,887	37	2,299	93	11,186
	2016	142	51	5,193	25	2,583	64	7,776	39	3,444	77	11,220
	2018	121	43	7,292	32	1,908	58	9,199	36	2,880	75	12,079
	2020	110	23	2,567	21	2,763	37	5,330	26	2,290	53	7,620

Source ADF&G Division of Subsistence SHARC surveys, 2004–2012, 2015, 2017, 2019, and 2021.

a. For data on all communities for 2020, see Appendix Tables D-2, D-3, and D-4.

b. SHARC = Subsistence halibut registration certificate; for 2003–2012, includes all SHARC holders living in the community; for 2014–2020 totals include SHARC holders and others identified as potential halibut fishers during household surveys.

c. Includes Dutch Harbor.

d. Sport harvests by SHARC holders only.

Table 14.–Halibut removals in Alaska, by regulatory area, 2020.

	Pounds net weight						
Area	Commercial landings[a]	Sport[b]	Subsistence[c]	Commercial discard mortality	Bycatch mortality	IPHC research	Total
2C	3,224,846	1,713,959	289,380	63,000	94,000	182,229	5,567,414
3A	6,818,145	3,298,518	175,370	188,000	978,000	470,804	11,928,837
3B	2,246,209	11,377	15,223	96,000	439,000	36,928	2,844,737
4	3,647,968	16,237	53,719	198,000	2,826,000	10,322	6,752,246
Alaska	**15,937,168**	**5,040,091**	**533,692**	**545,000**	**4,337,000**	**700,283**	**27,093,234**

Sources Erikson, Tran (2021:3–4,10); ADF&G Division of Subsistence, SHARC surveys, 2021.

a. Commercial catch includes the Metlakatla fishery catch in Area 2C.

b. Projected harvests; includes sport landings in guided and unguided fisheries and sport mortality.

c. Includes 2,935 pounds of U32 (sublegal) halibut legally retained by CDQ organizations in areas 4D and 4E for personal use. The subsistence harvest by SHARC holders was 530,757 pounds, including 50,784 pounds in Area 4.

Table 15.–Comparison of selected SHARC survey results, 2003–2012, 2014, 2016, and 2020.

	Study years														Percent change: 2020 compared to…	
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2014	2016	2018	2020	2018	Previous 13-year average
Response to survey																
Number of SHARCs issued[a, b,c,d]	11,635	13,813	14,306	14,206	15,047	11,565	11,733	10,953	11,145	9,944	9,719	8,925	8,576	8,135	-5.1%	-30.2%
Number of surveys returned	7,593	8,524	8,565	8,426	8,682	7,316	6,944	6,670	7,589	7,054	6,336	5,862	5,852	5,127	-12.4%	-30.1%
Response rate	65.3%	61.7%	59.9%	59.3%	57.7%	63.3%	59.2%	60.9%	68.1%	70.9%	65.2%	65.7%	68.2%	63.0%	-7.6%	-0.7%
Subsistence halibut fishing																
Estimated number of subsistence halibut fishers	4,942	5,984	5,621	5,909	5,933	5,303	5,296	4,991	4,705	4,394	4,506	4,408	4,094	3,777	-7.8%	-25.7%
Percent of all SHARC holders subsistence fishing	42.5%	43.3%	39.3%	41.6%	39.4%	45.9%	45.1%	45.6%	42.2%	44.2%	46.4%	49.4%	47.7%	46.4%	-2.8%	5.4%
Estimated number of subsistence-harvested halibut	43,926	52,412	55,875	54,089	53,697	48,604	45,434	43,332	38,162	37,093	40,698	36,815	29,963	27,241	-9.1%	-39.0%
Estimated net pounds of subsistence-harvested halibut	1,041,330	1,193,162	1,178,222	1,125,312	1,032,293	886,988	861,359	797,560	697,656	686,991	760,469	727,178	615,789	530,757	-13.8%	-40.5%
Average weight of subsistence-harvested halibut	23.7	22.8	21.1	20.8	19.2	18.2	19.0	18.4	18.3	18.5	18.7	19.8	20.6	19.5	-5.2%	-2.2%
Average harvest per fisher, fish	8.9	8.8	9.9	9.2	9.1	9.2	8.6	8.7	8.1	8.4	9.0	8.4	7.3	7.2	-1.4%	-17.4%
Average harvest per fisher, net pounds	210.7	199.4	209.6	190.4	174.0	167.3	162.6	159.8	148.3	156.3	168.8	165.0	150.4	140.5	-6.6%	-19.3%
Sport halibut fishing by SHARC holders																
Estimated number of sport halibut fishers	2,580	3,107	3,147	2,894	2,566	2,609	2,528	2,297	2,070	2,231	2,228	2,127	1,942	1,876	-3.4%	-24.6%
Percent of all SHARC holders sport fishing	22.2%	22.5%	22.0%	20.4%	17.1%	22.6%	21.5%	21.0%	18.6%	22.4%	22.9%	23.8%	22.6%	23.1%	1.8%	7.2%
Estimated number of sport halibut	10,784	12,530	14,096	11,219	10,959	11,427	9,938	8,651	8,235	8,727	8,543	7,814	6,770	6,838	1.0%	-31.5%
Estimated net pounds of sport halibut	245,947	251,092	293,415	223,639	196,198	197,760	165,318	149,241	135,224	146,174	150,717	144,638	125,505	124,090	-1.1%	-33.5%
Average weight of sport-harvested halibut	22.8	20.0	20.8	19.9	17.9	17.3	16.6	17.3	16.4	16.7	17.6	18.5	18.5	18.1	-2.1%	-1.9%
Average harvest per fisher, fish	4.2	4.0	4.5	3.9	4.3	4.4	3.9	3.8	4.0	3.9	3.8	3.7	3.5	3.6	4.6%	-8.5%
Average harvest per fisher, net pounds	95.3	80.8	93.2	77.3	76.5	75.8	65.4	65.0	65.3	65.5	67.6	68.0	64.6	66.2	2.4%	-10.5%
Total number of halibut fishers																
Estimated number of fishers, subsistence or sport	5,941	6,980	6,876	6,899	6,787	6,202	6,153	5,835	5,496	5,358	5,570	5,341	4,977	4,683	-5.9%	-22.4%
Percent of total SHARC holders who fished	51.1%	50.5%	48.1%	48.6%	45.1%	53.6%	52.4%	53.3%	49.3%	53.9%	57.3%	59.8%	58.0%	57.6%	-0.8%	9.9%

Sources Fall and Koster 2018; ADF&G Division of Subsistence, SHARC surveys, 2019 and 2021.

a. In 2014, equals total SHARCs issued (9,474) plus potential subsistence halibut fishers in 4 study communities.

b. In 2016, equals total SHARCs issued (8,779) plus potential subsistence halibut fishers in 2 study communities.

c. In 2018, equals total SHARCs issued (8,489) plus potential subsistence halibut fishers in 2 study communities.

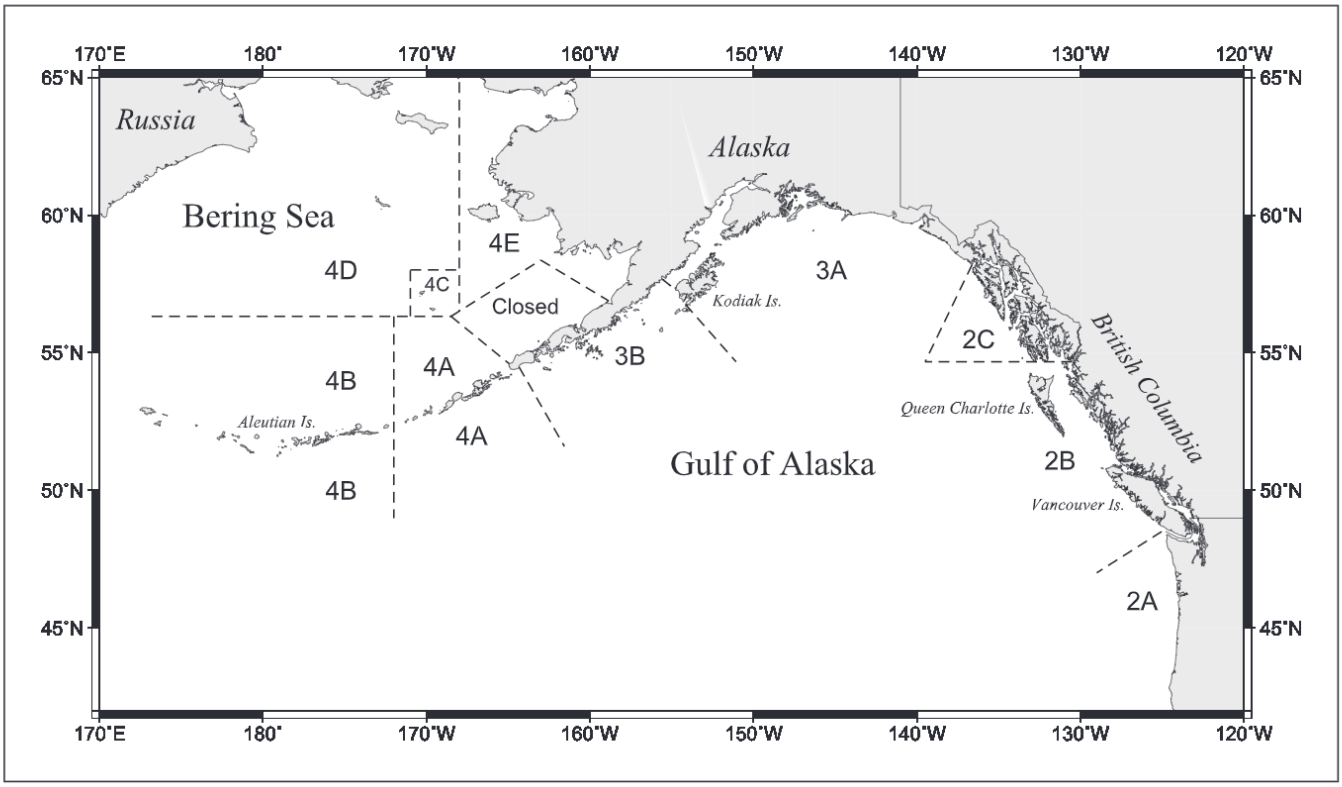

Figure 1.–Regulatory areas for the halibut fishery.

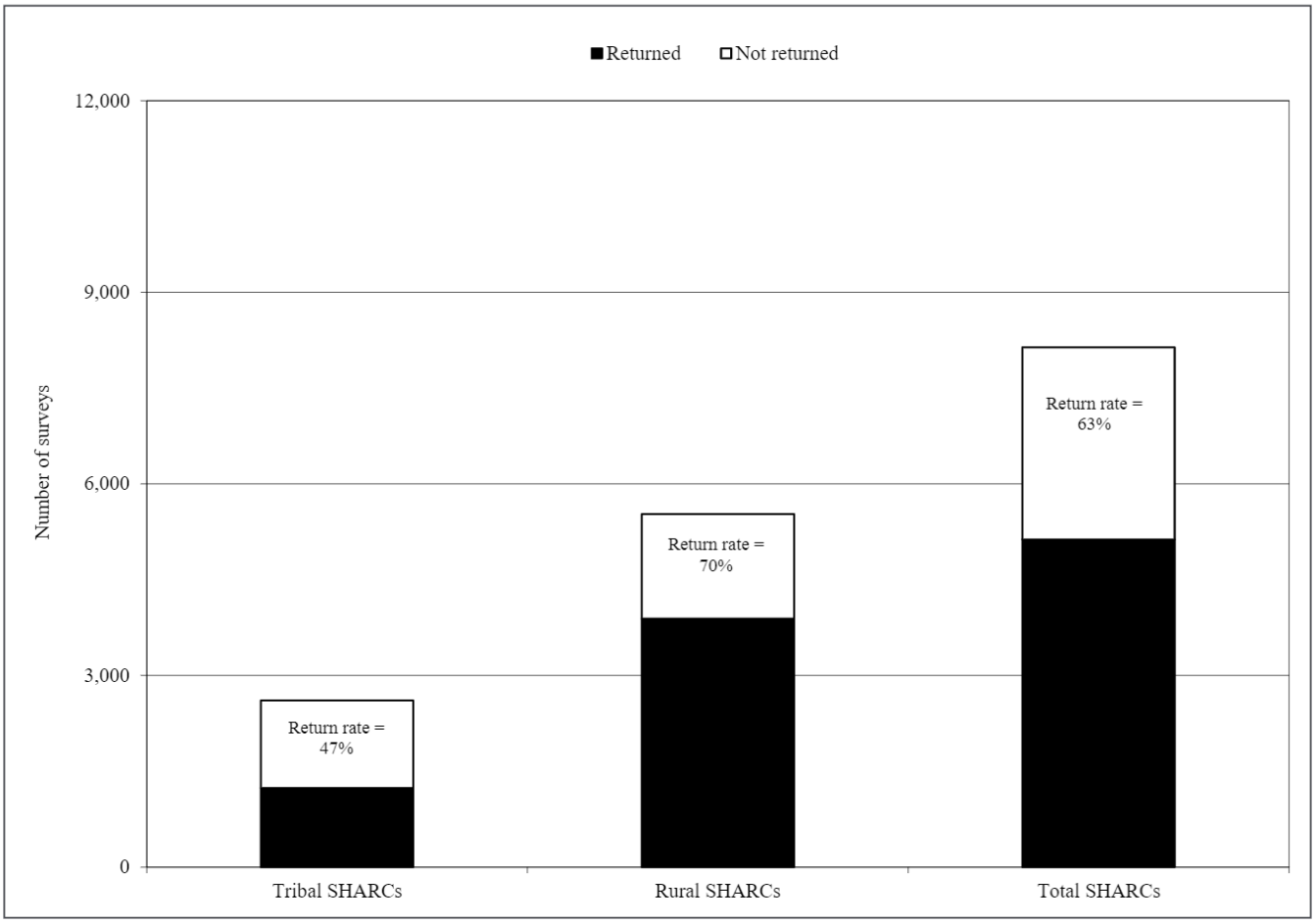

Figure 2.–Number of surveys returned and return rates for subsistence halibut surveys, by SHARC type, 2020.

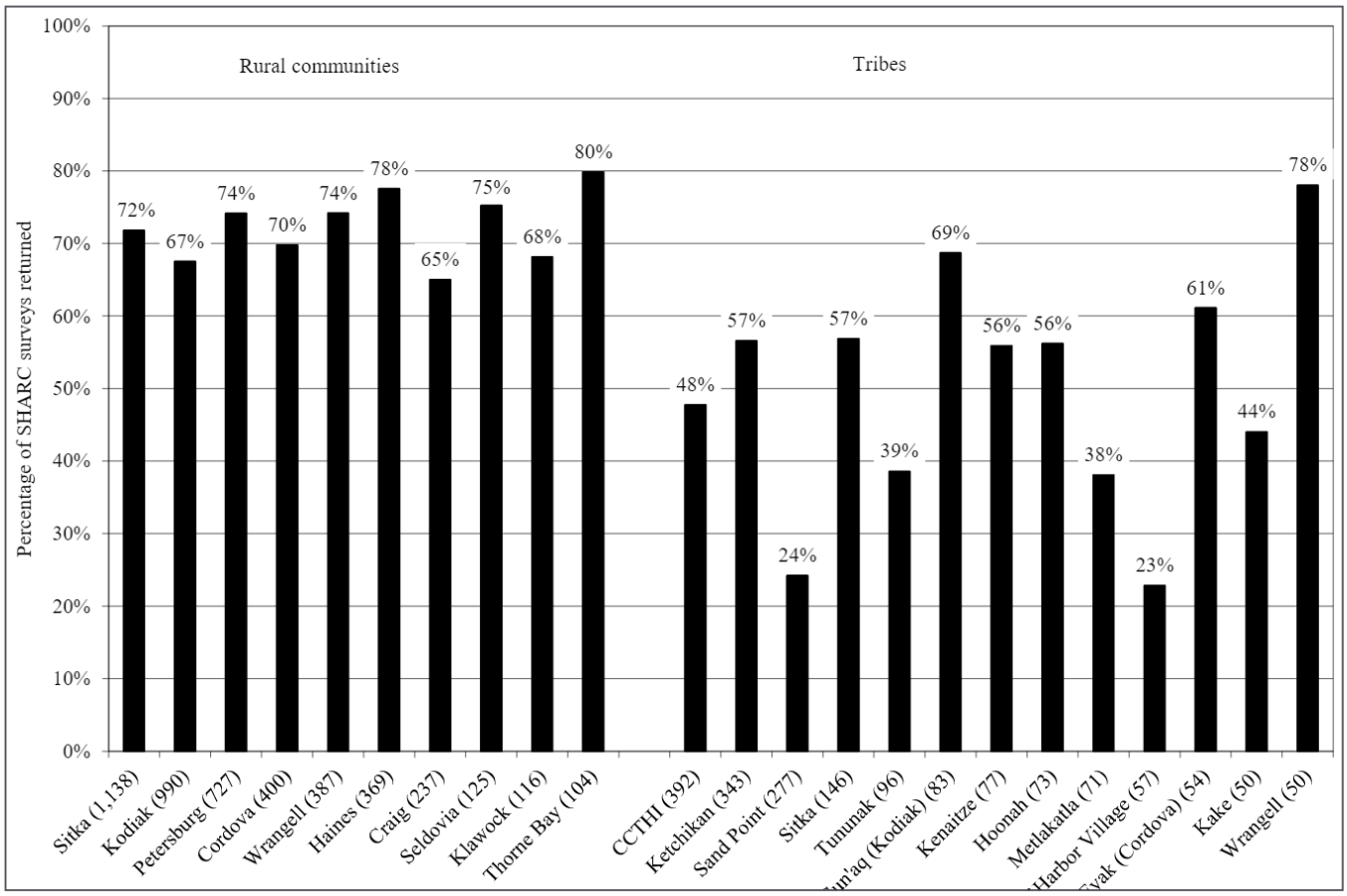

Figure 3.–SHARC survey return rates, communities with more than 100 SHARCs issued and tribes with more than 60 SHARCs issued, 2020.

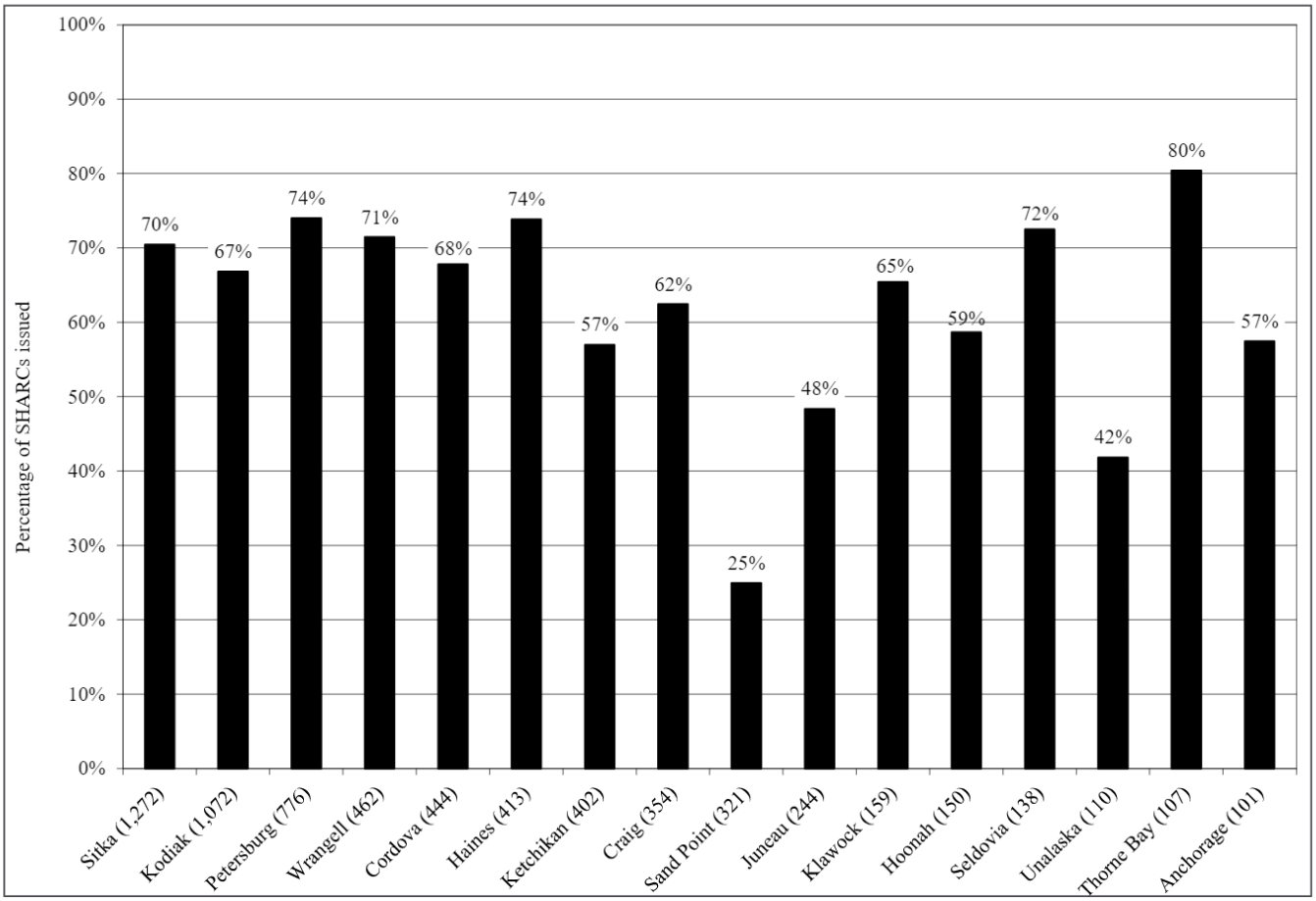

Figure 4.–Return rate by place of residence, communities with 100 or more SHARCs issued, 2020.

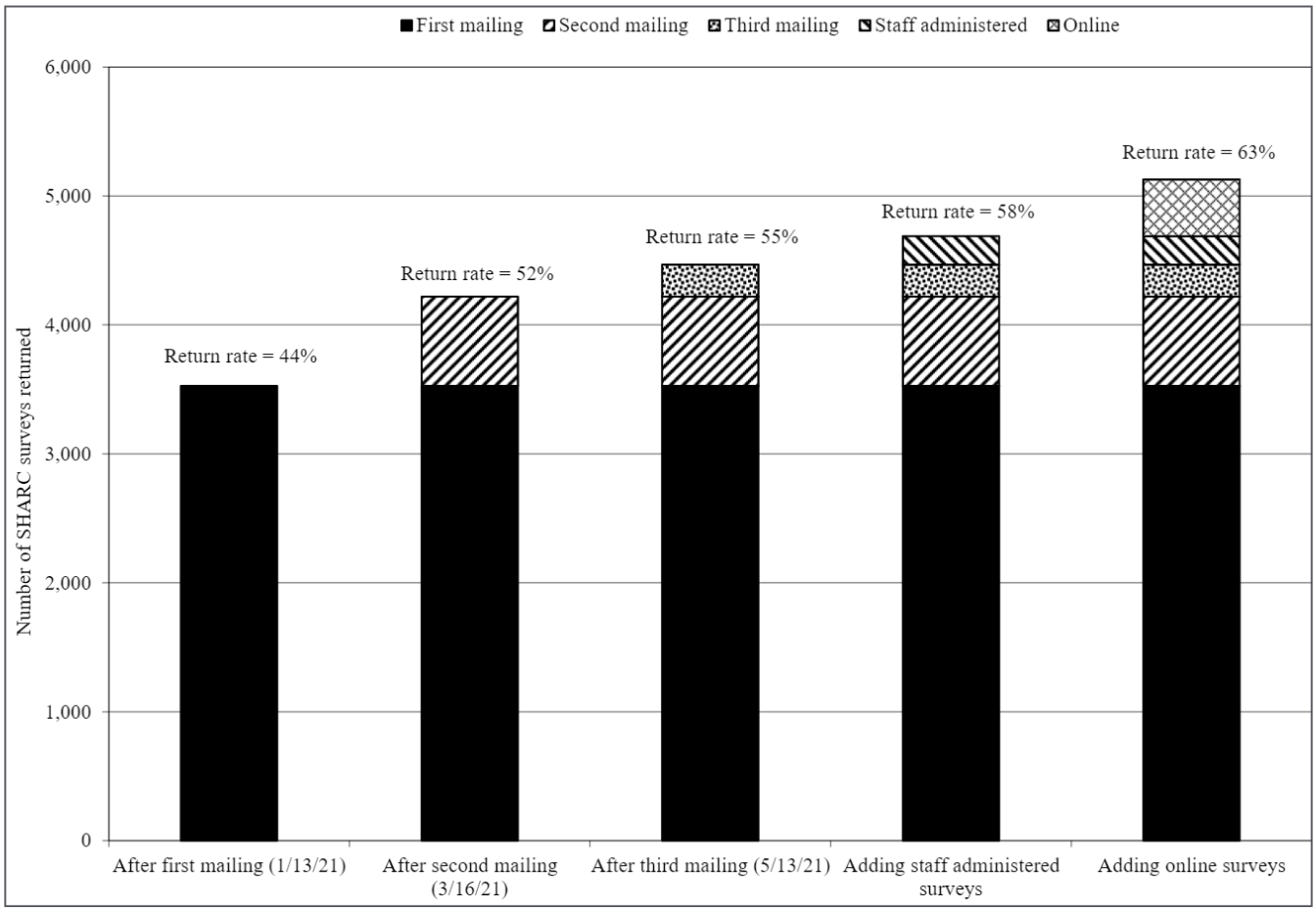

Figure 5.–Number of survey responses by response category, 2020.

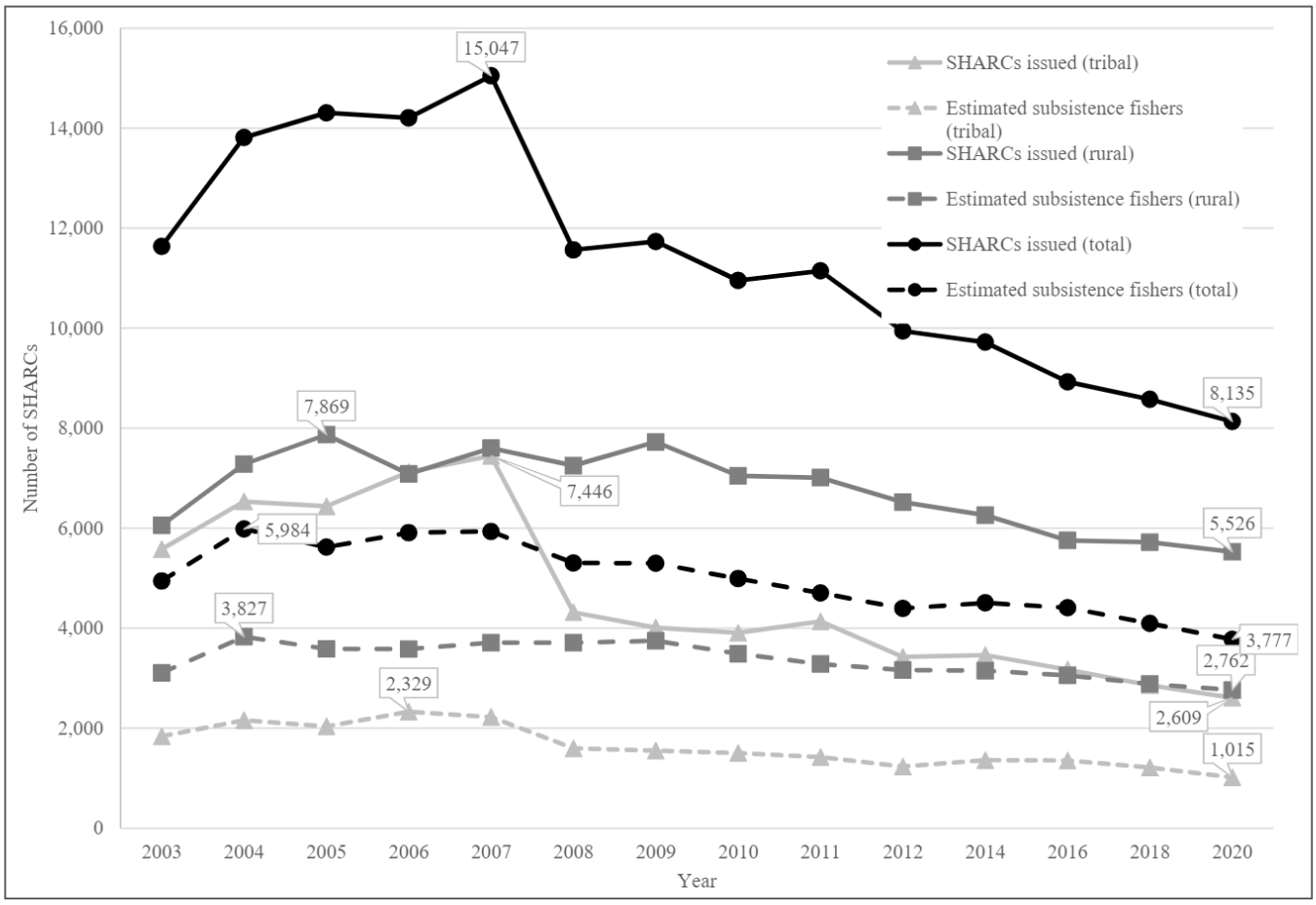

Figure 6.–Number of SHARCs issued and estimated number of halibut fishers by SHARC type, 2003–2012, 2014, 2016, and 2020.

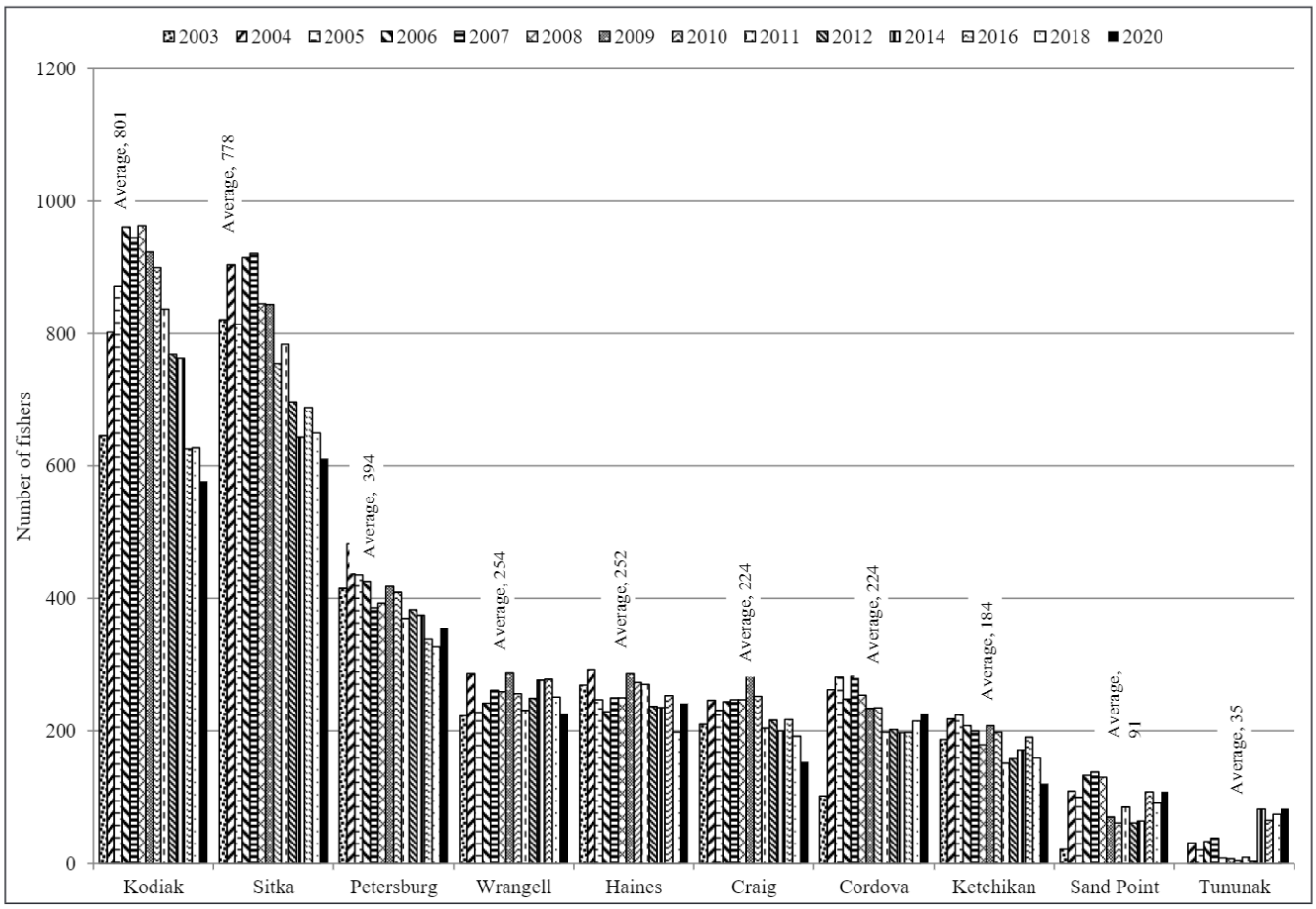

Figure 7.–Number of subsistence halibut fishers by residence, 2003–2012, 2014, 2016, and 2020.

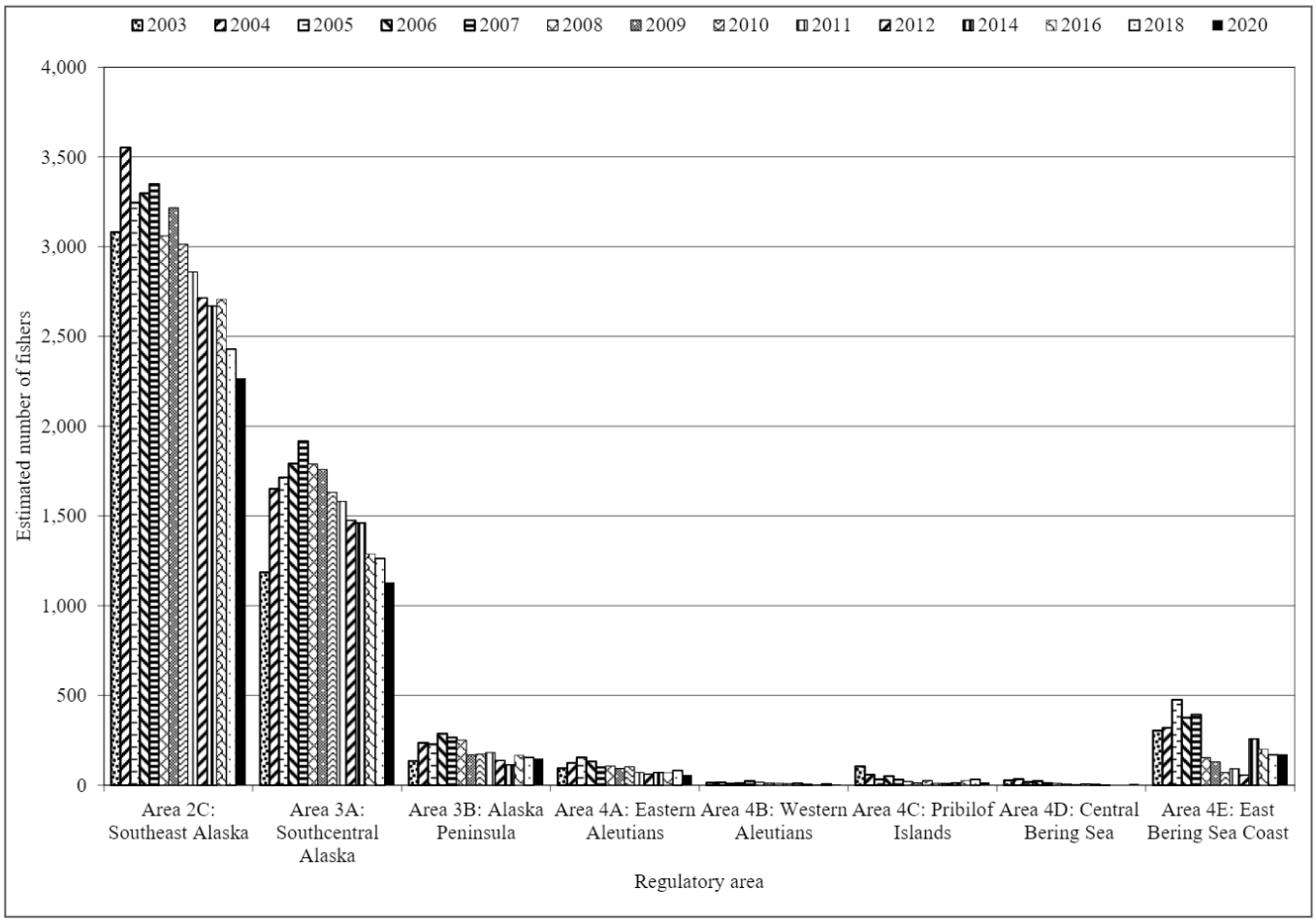

Figure 8.–Estimated number of Alaska subsistence halibut fishers, by regulatory area fished, 2003–2012, 2014, 2016, and 2020.

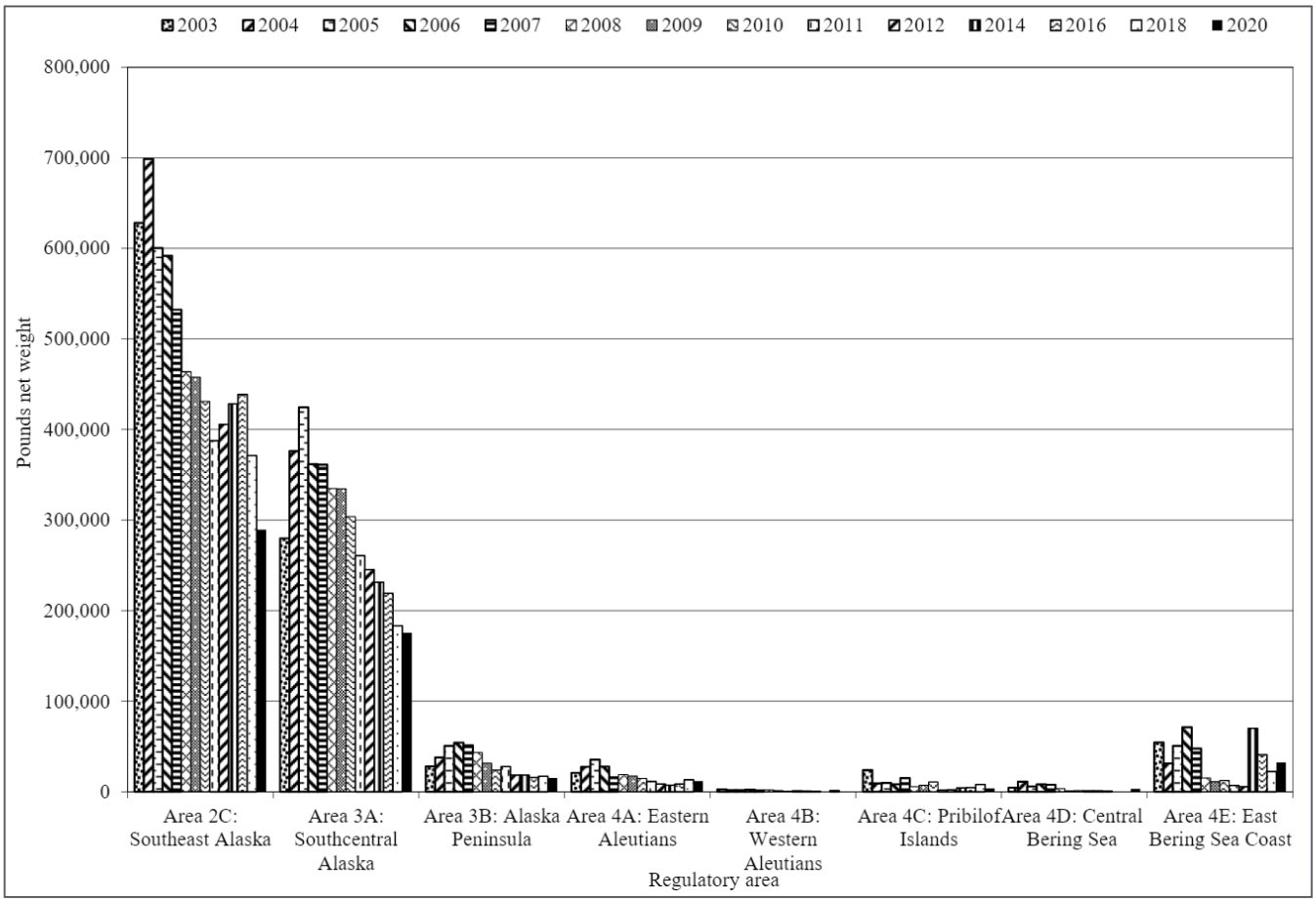

Figure 9.–Estimated subsistence halibut harvests in Alaska, pounds net weight, by regulatory area of tribe and rural community, 2003–2012, 2014, 2016, and 2020.

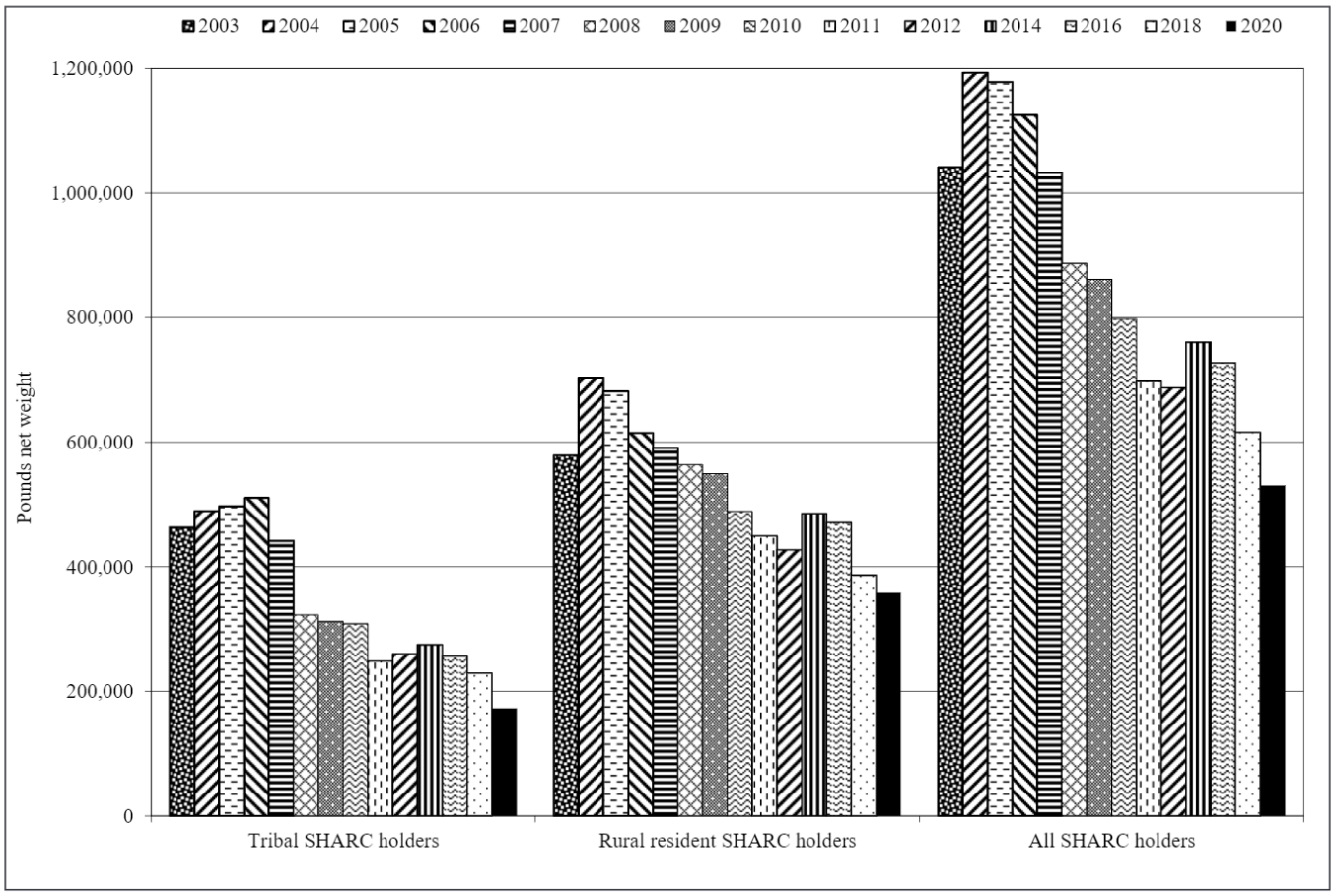

Figure 10.–Estimated Alaska subsistence halibut harvests, pounds net weight, by SHARC type, 2003–2012, 2014, 2019, and 2020.

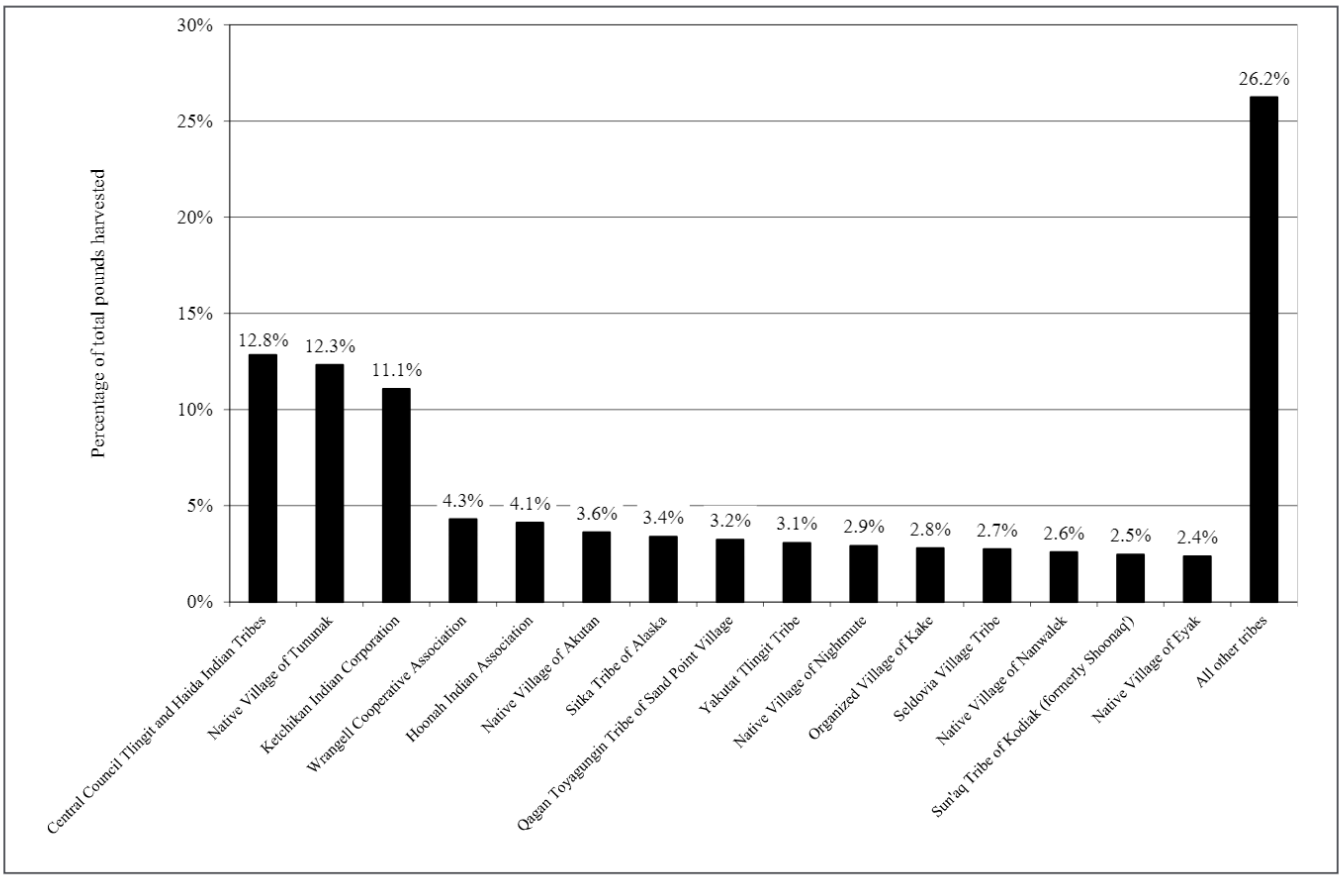

Figure 11.–Percentage of tribal subsistence halibut harvest by tribe, 2020.

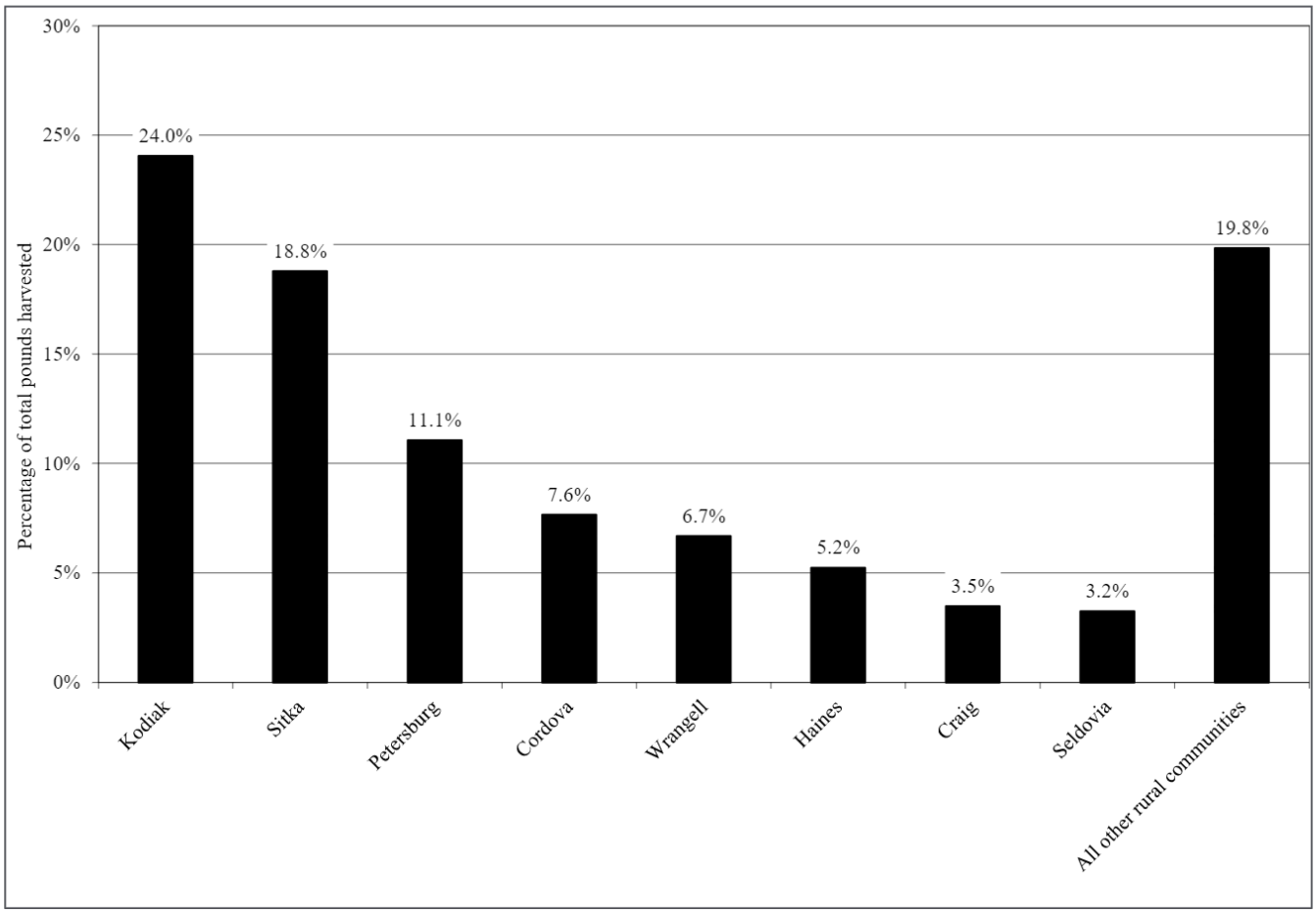

Figure 12.–Percentage of rural community subsistence halibut harvest by community, 2020.

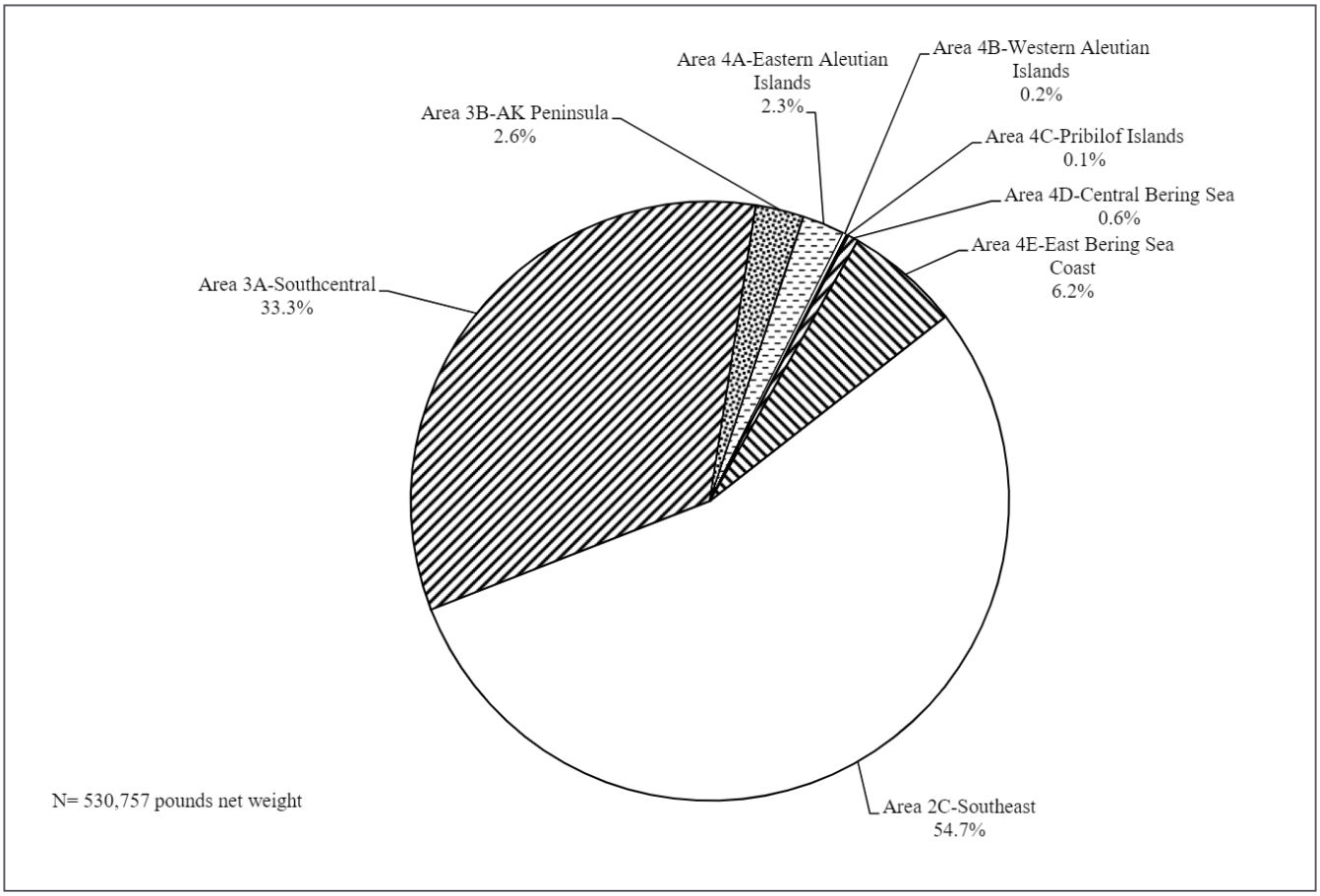

Figure 13.–Percentage of Alaska subsistence halibut harvest, by regulatory area fished, 2020.

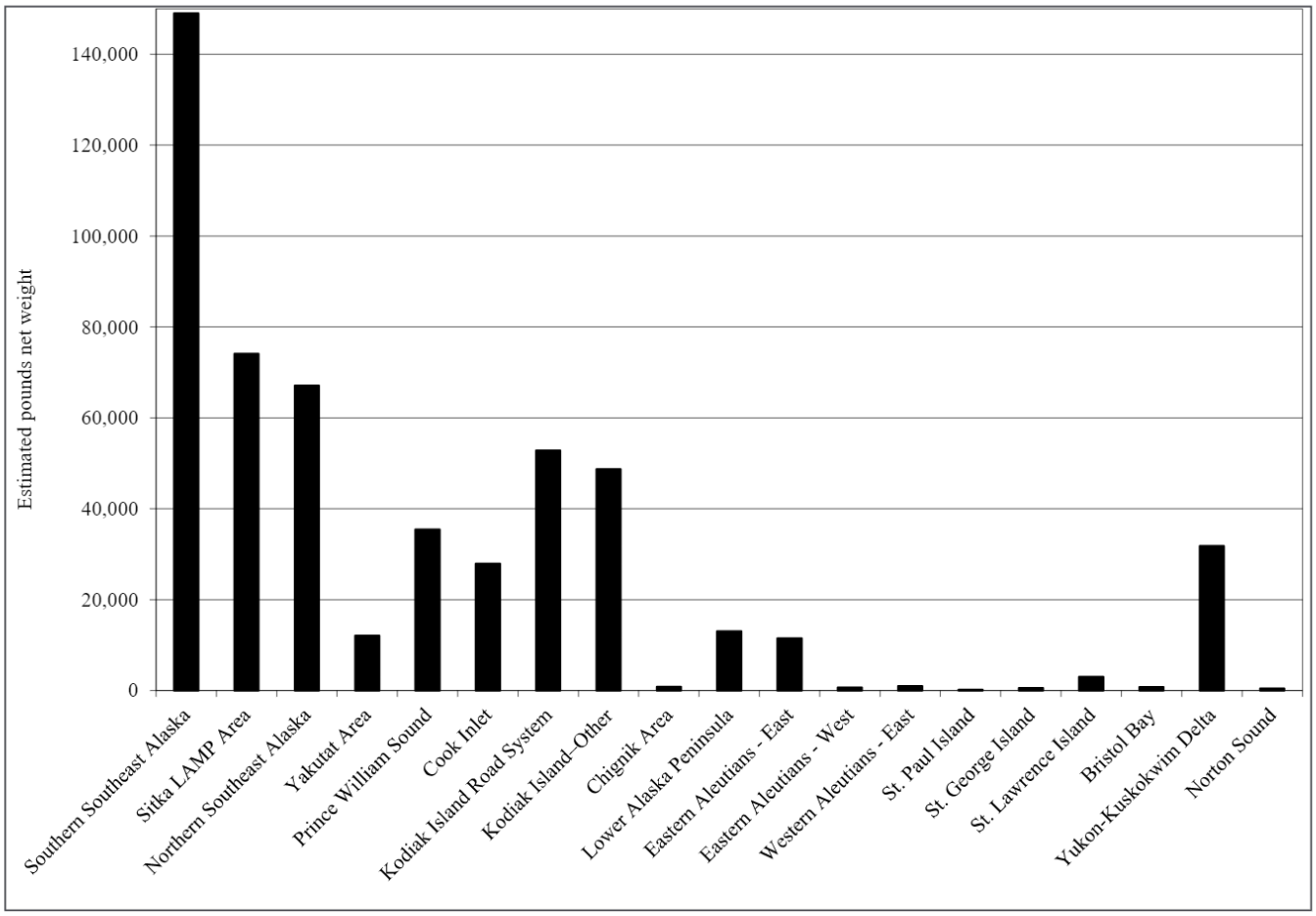

Figure 14.–Alaska subsistence harvests by geographic area, 2020.

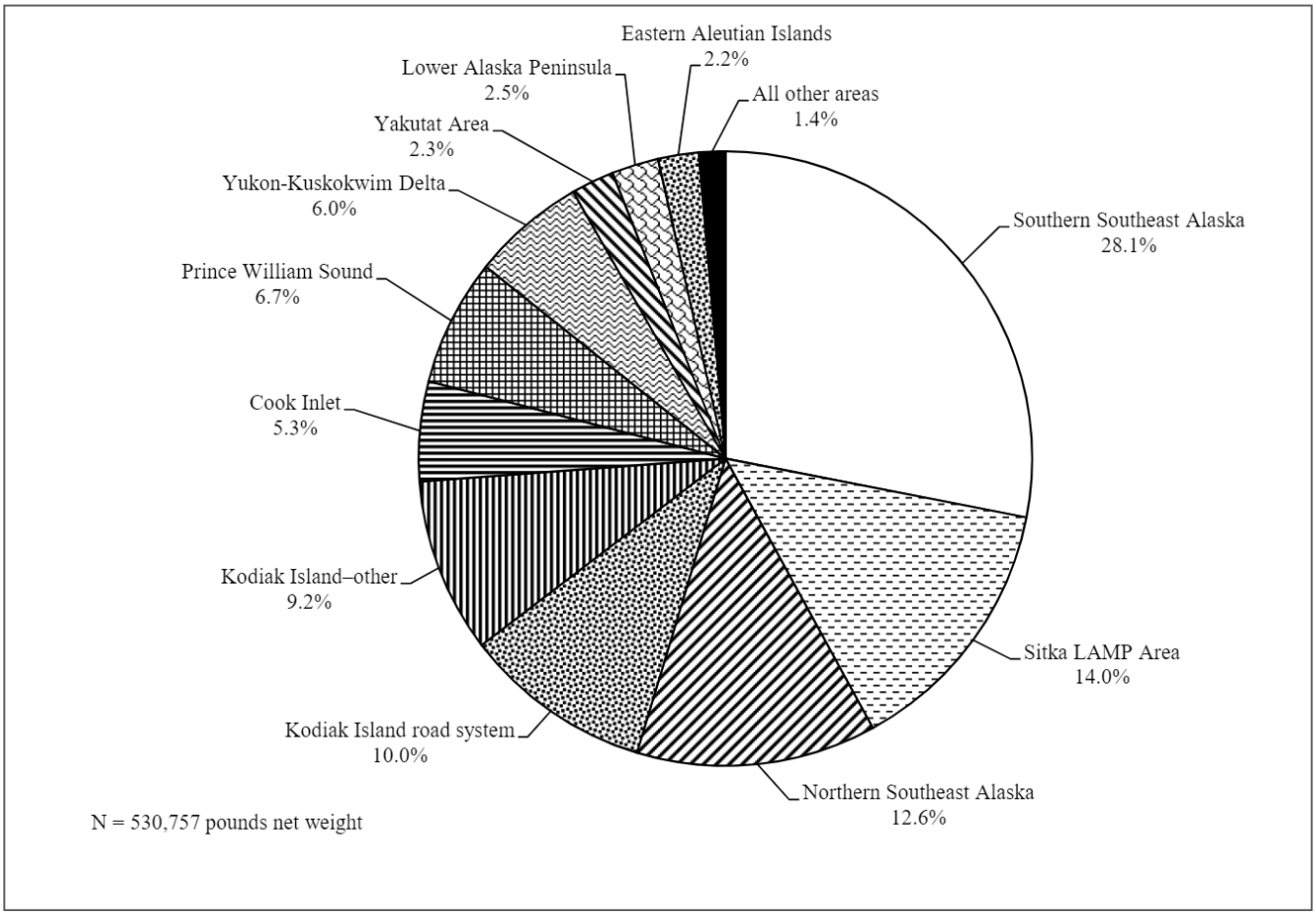

Figure 15.–Percentage of Alaska subsistence halibut harvest by geographic area, 2020.

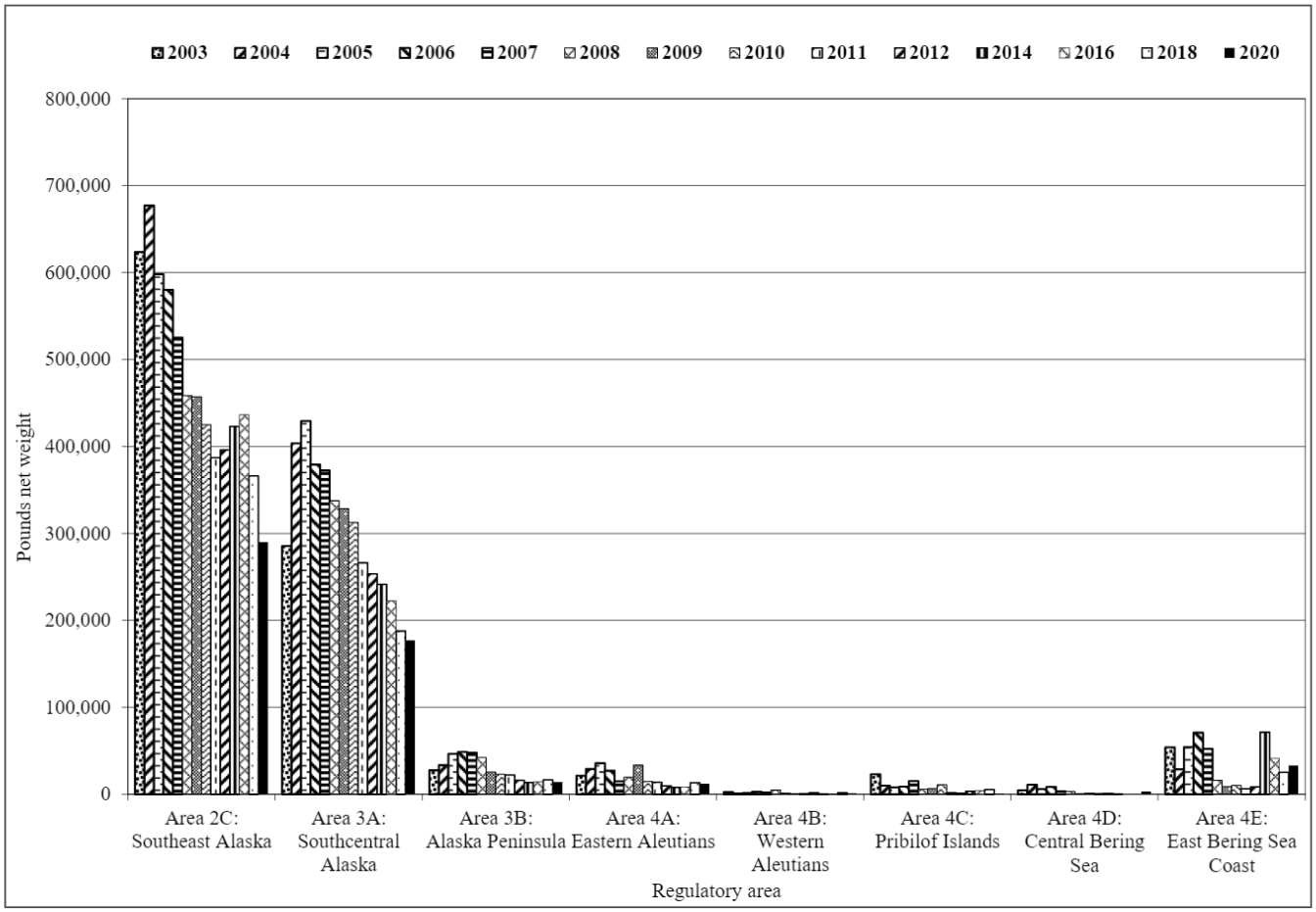

Figure 16.–Estimated subsistence halibut harvests in Alaska, pounds net weight, by regulatory area fished, 2003–2012, 2014, 2016, and 2020.

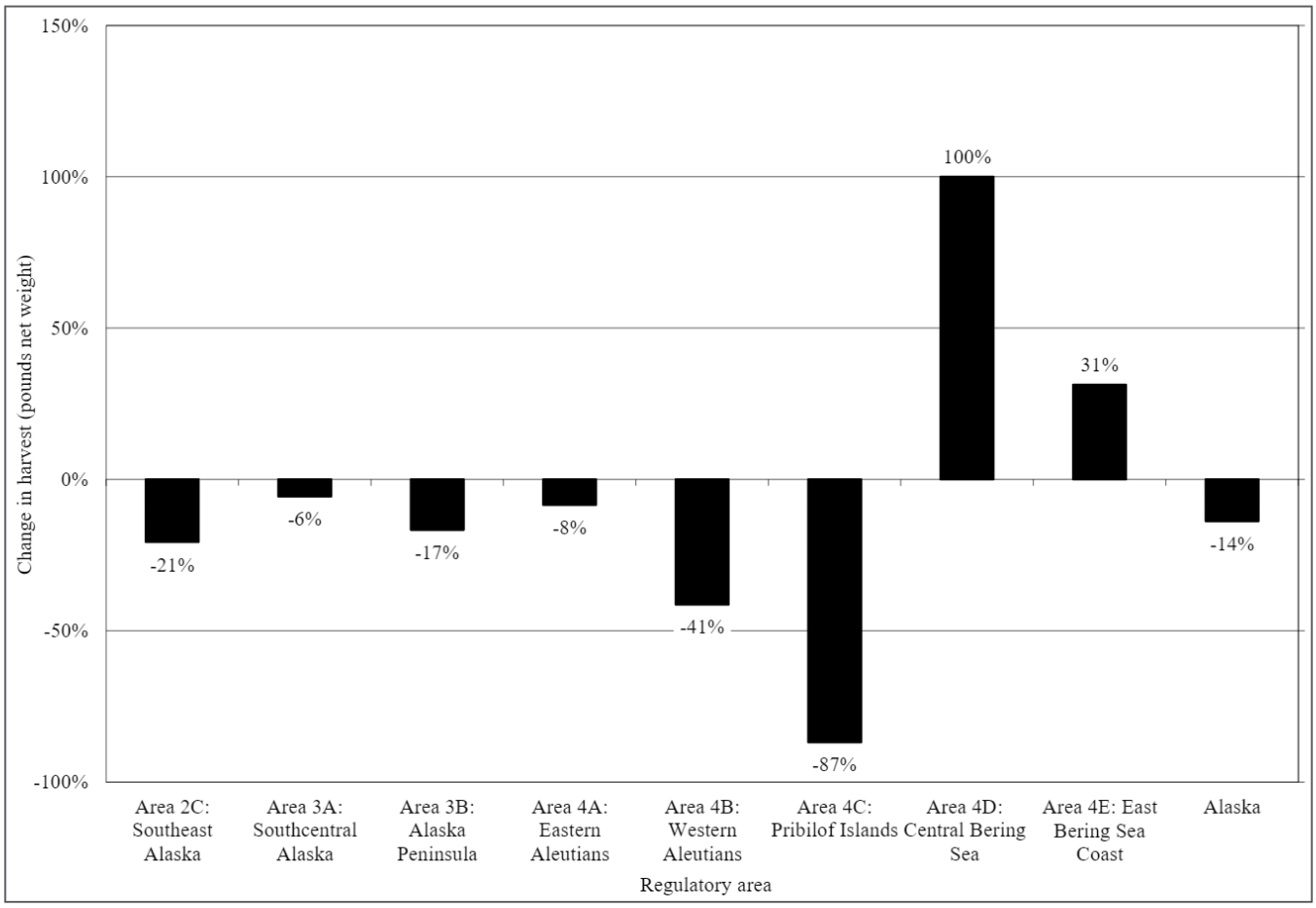

Figure 17.–Change in Alaska subsistence halibut harvests, by regulatory area fished, from 2018 to 2020.

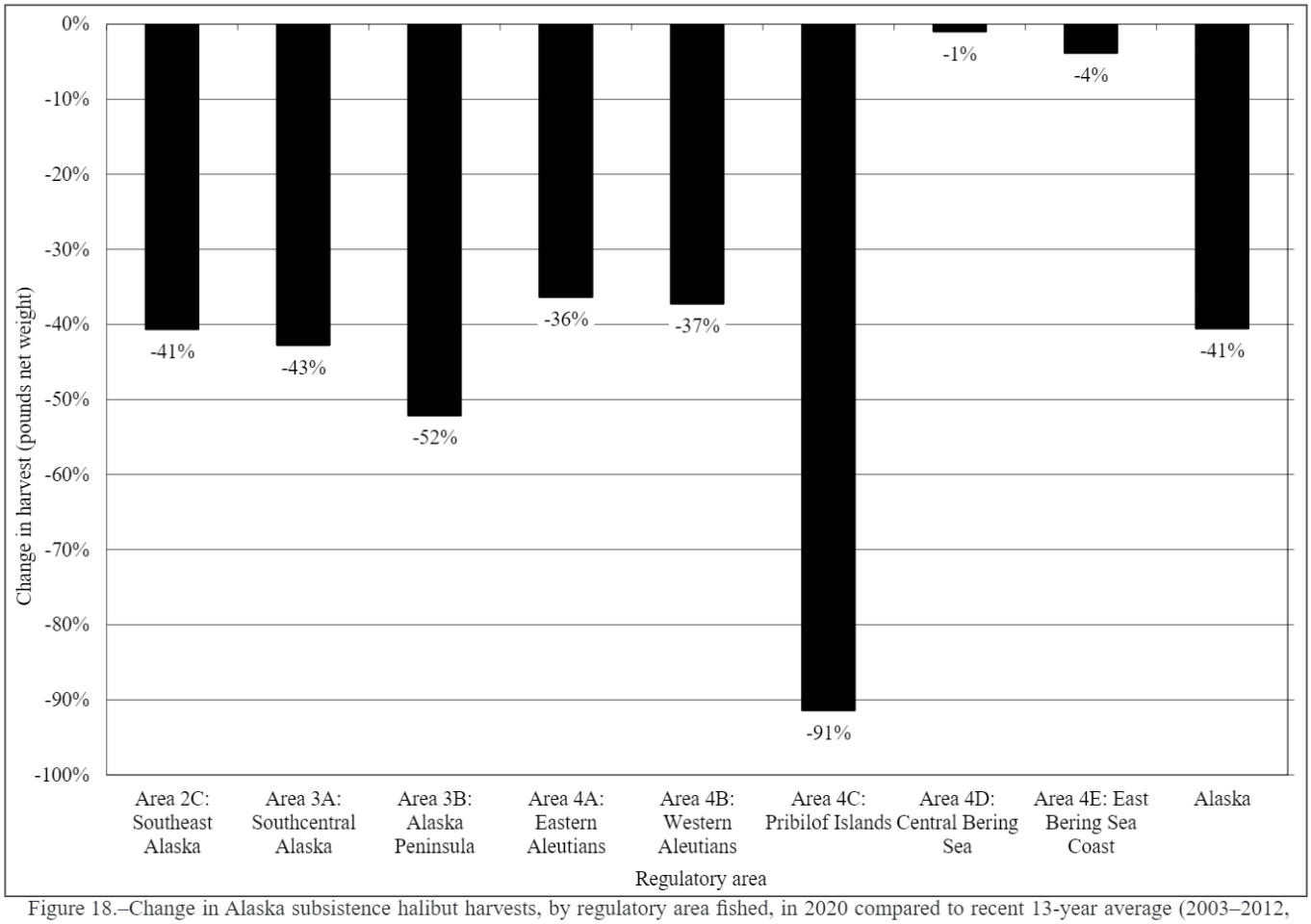

Figure 18.–Change in Alaska subsistence halibut harvests, by regulatory area fished, in 2020 compared to recent 13-year average (2003–2012, 2014, 2016, and 2018.

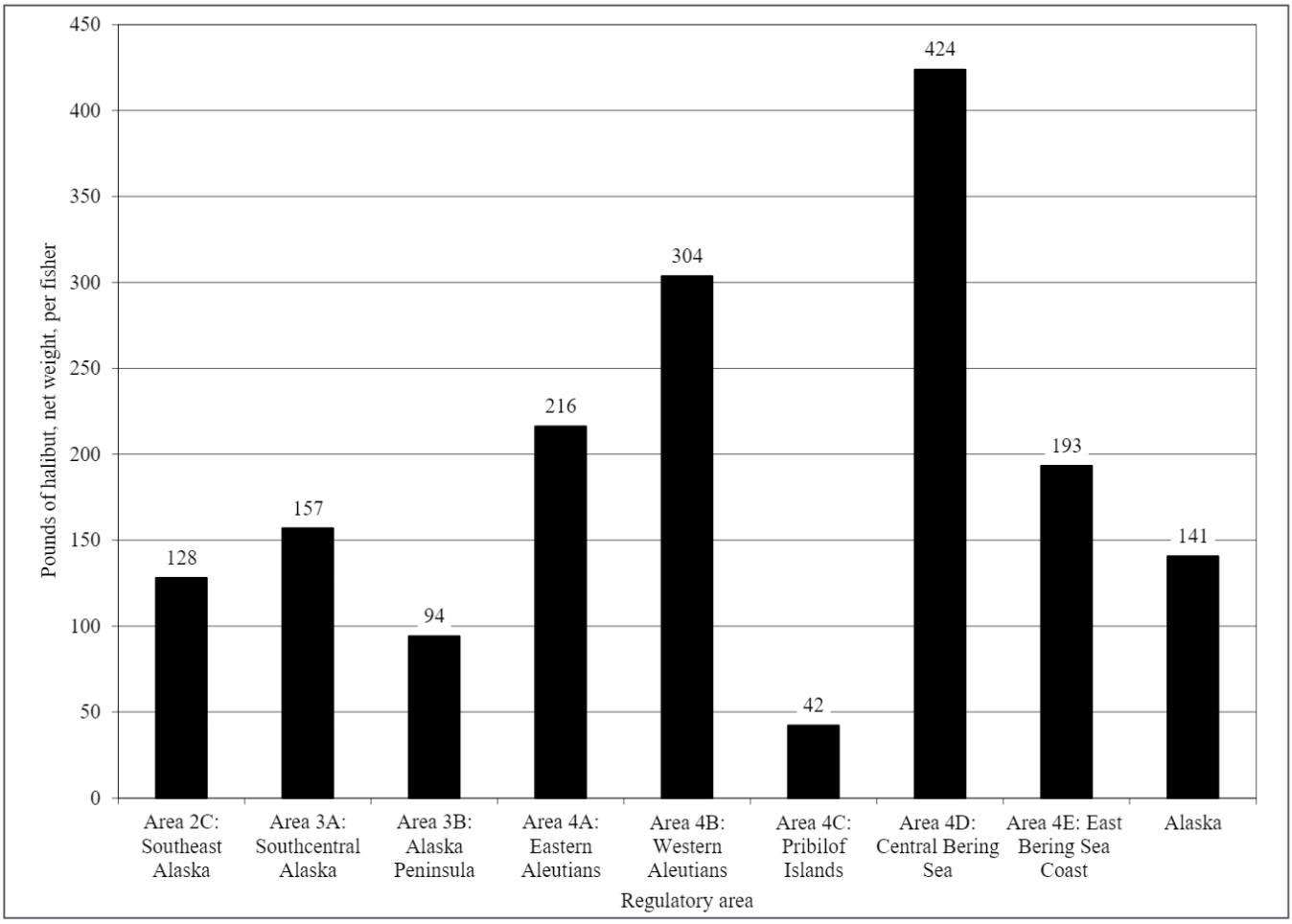

Figure 19.–Average subsistence harvest of halibut per fisher in Alaska, in pounds net weight, by regulatory area, 2020.

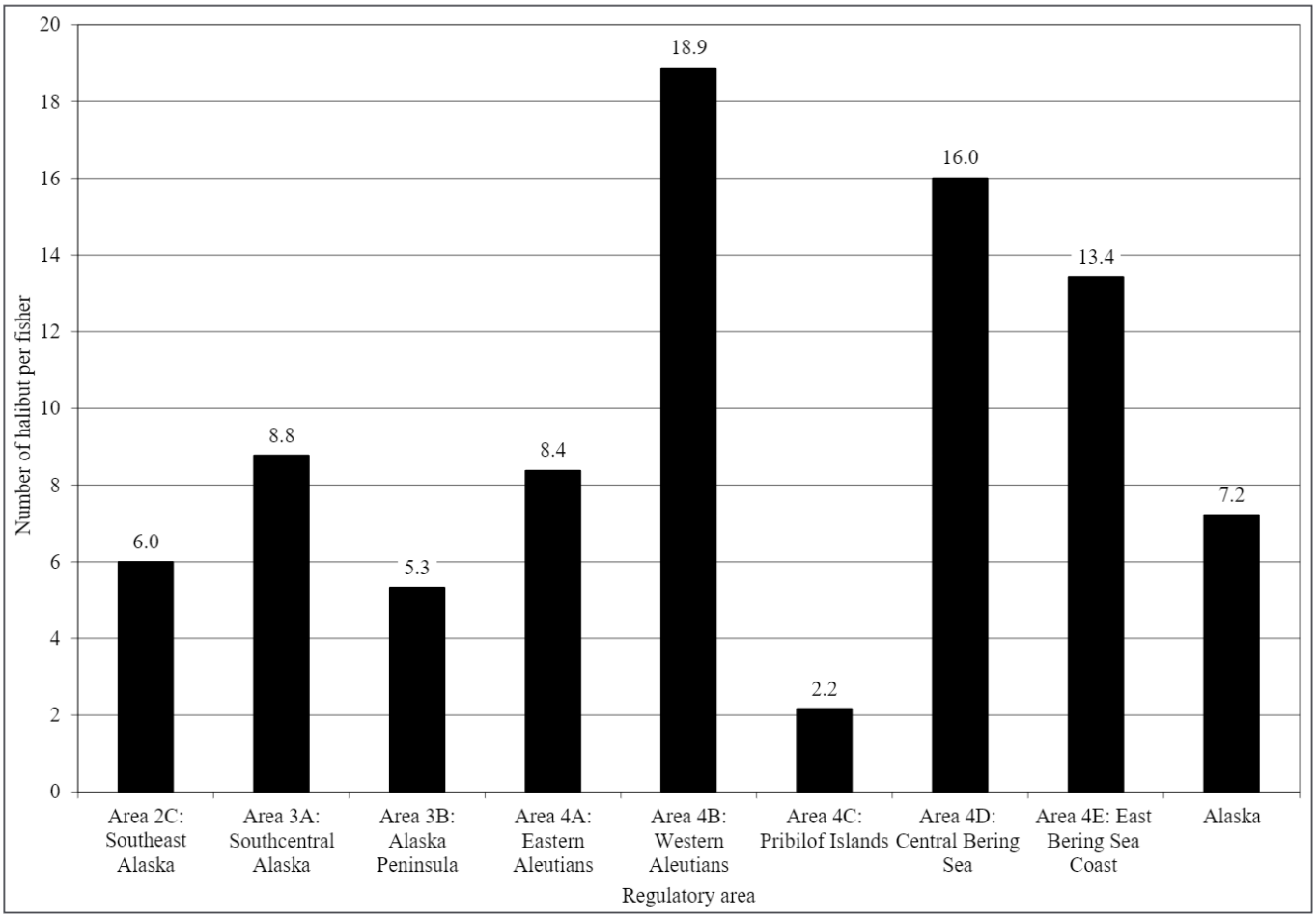

Figure 20.–Average subsistence harvest of halibut per fisher in Alaska, in number of fish, by regulatory area, 2020.

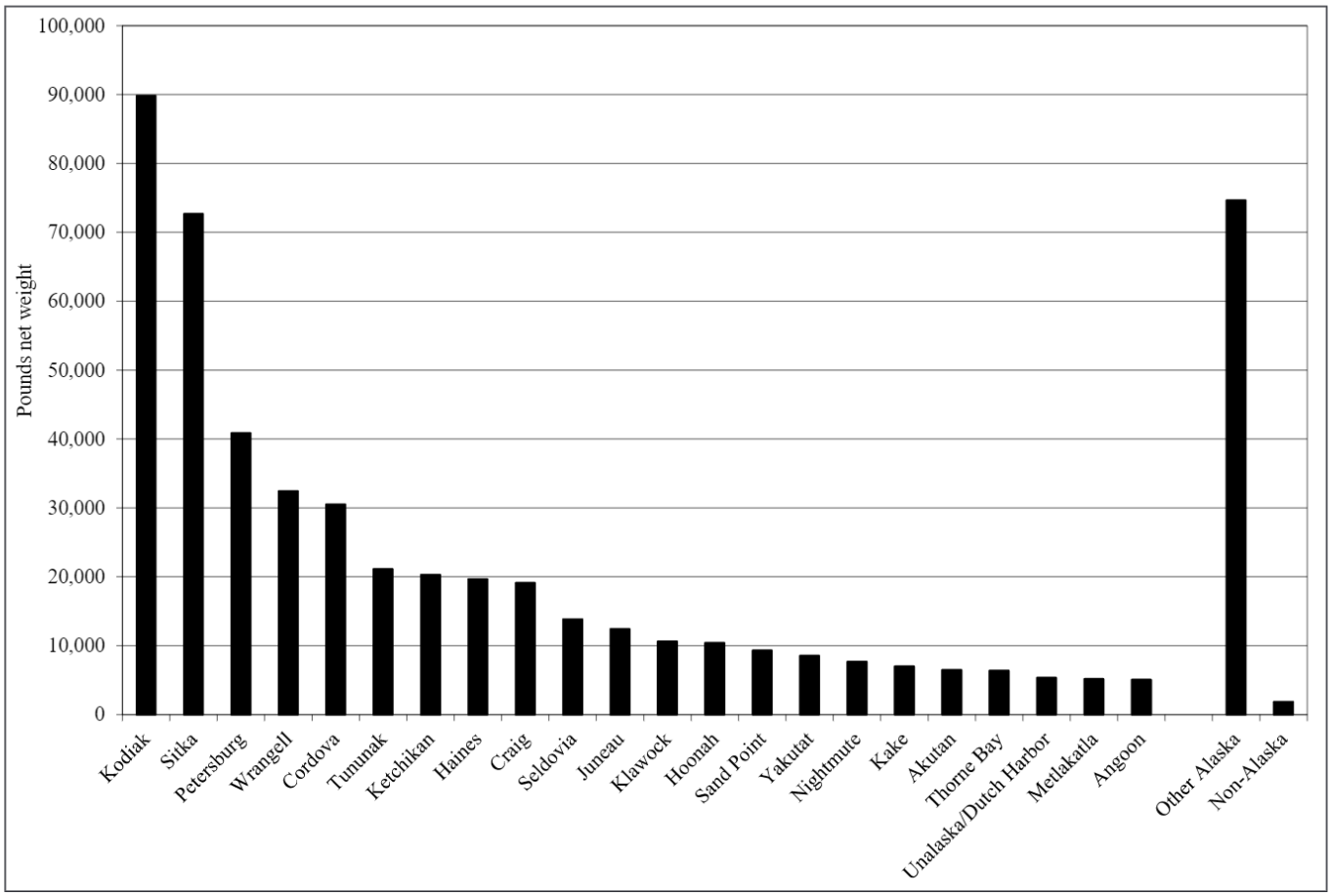

Figure 21.–Alaska subsistence halibut harvests by place of residence, 2020.

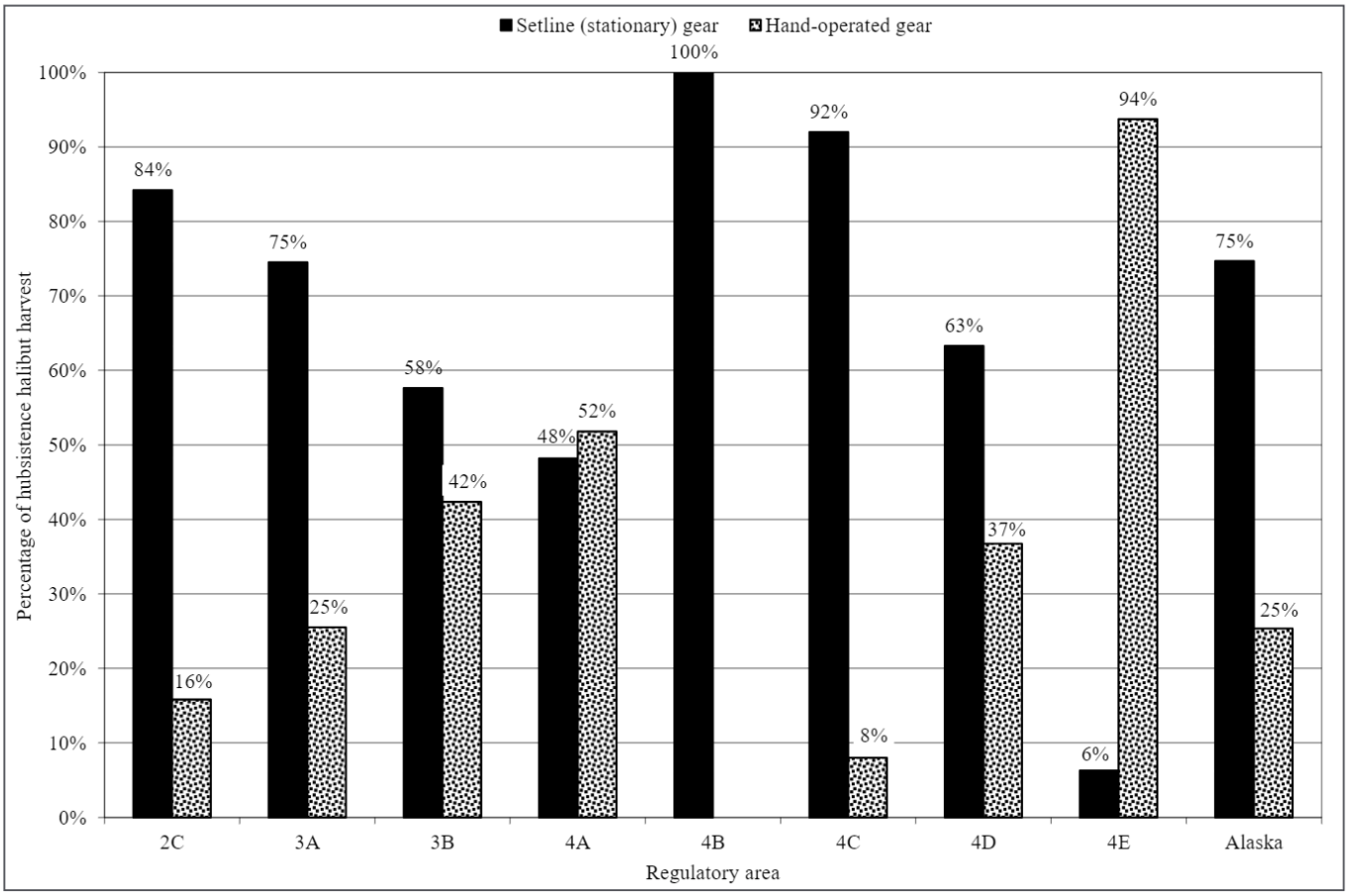

Figure 22.–Percentage of Alaska subsistence halibut harvest by gear type, by regulatory area, 2020.

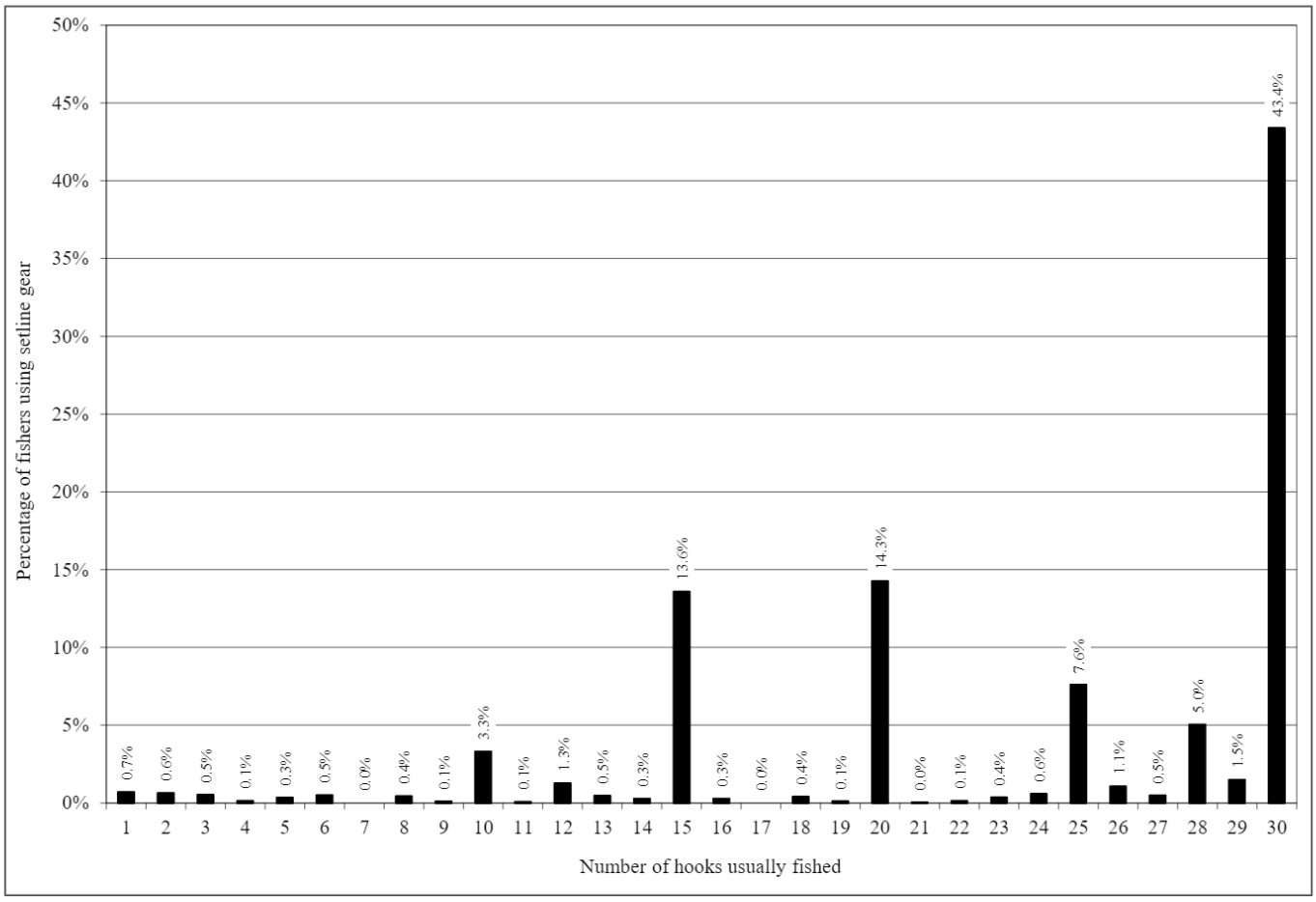

Figure 23.–Number of hooks usually fished, setline (stationary) gear, Alaska subsistence halibut fishery, 2020.

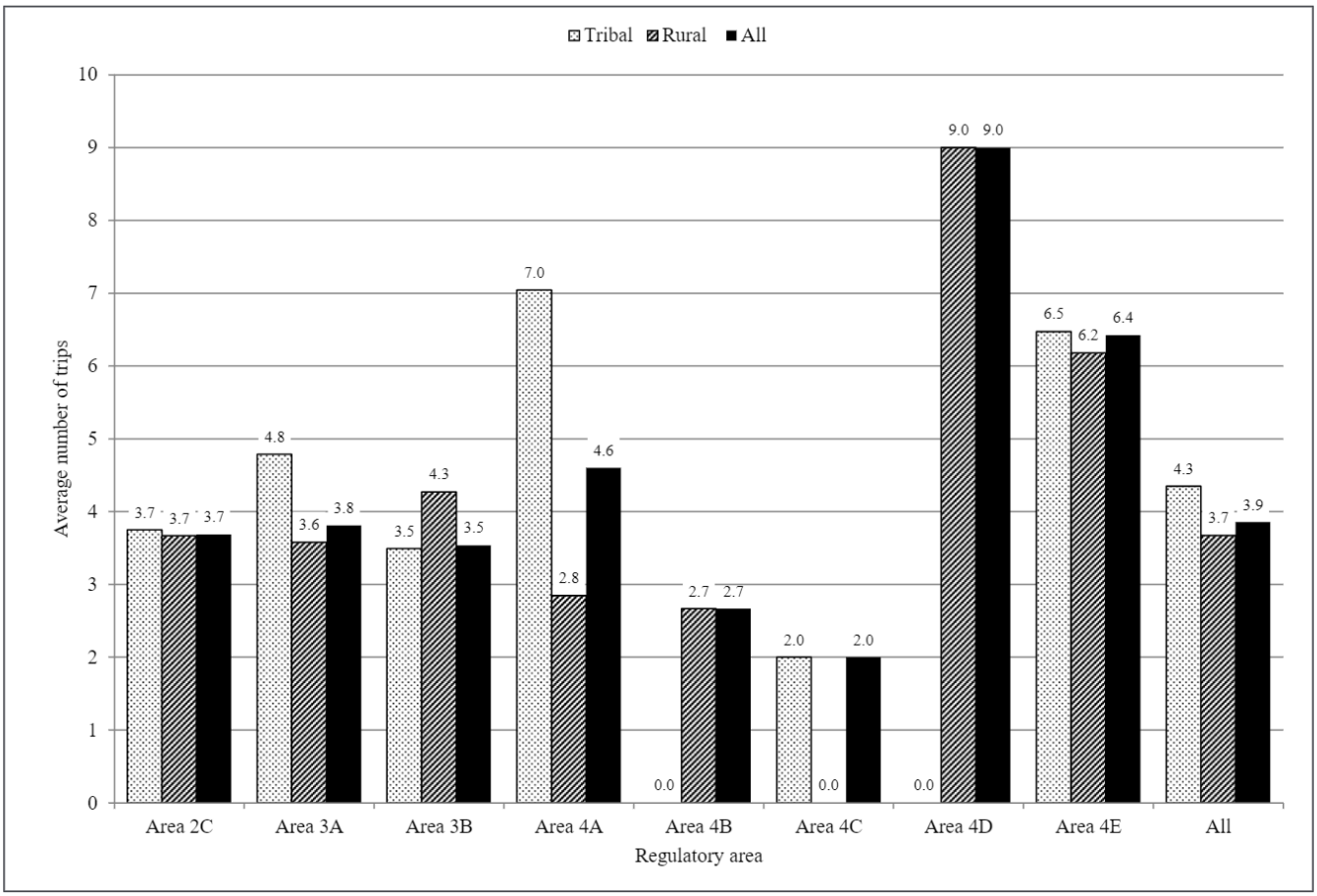

Figure 24.–Average number of subsistence fishing trips for halibut, by Alaska regulatory area and SHARC type, 2020.

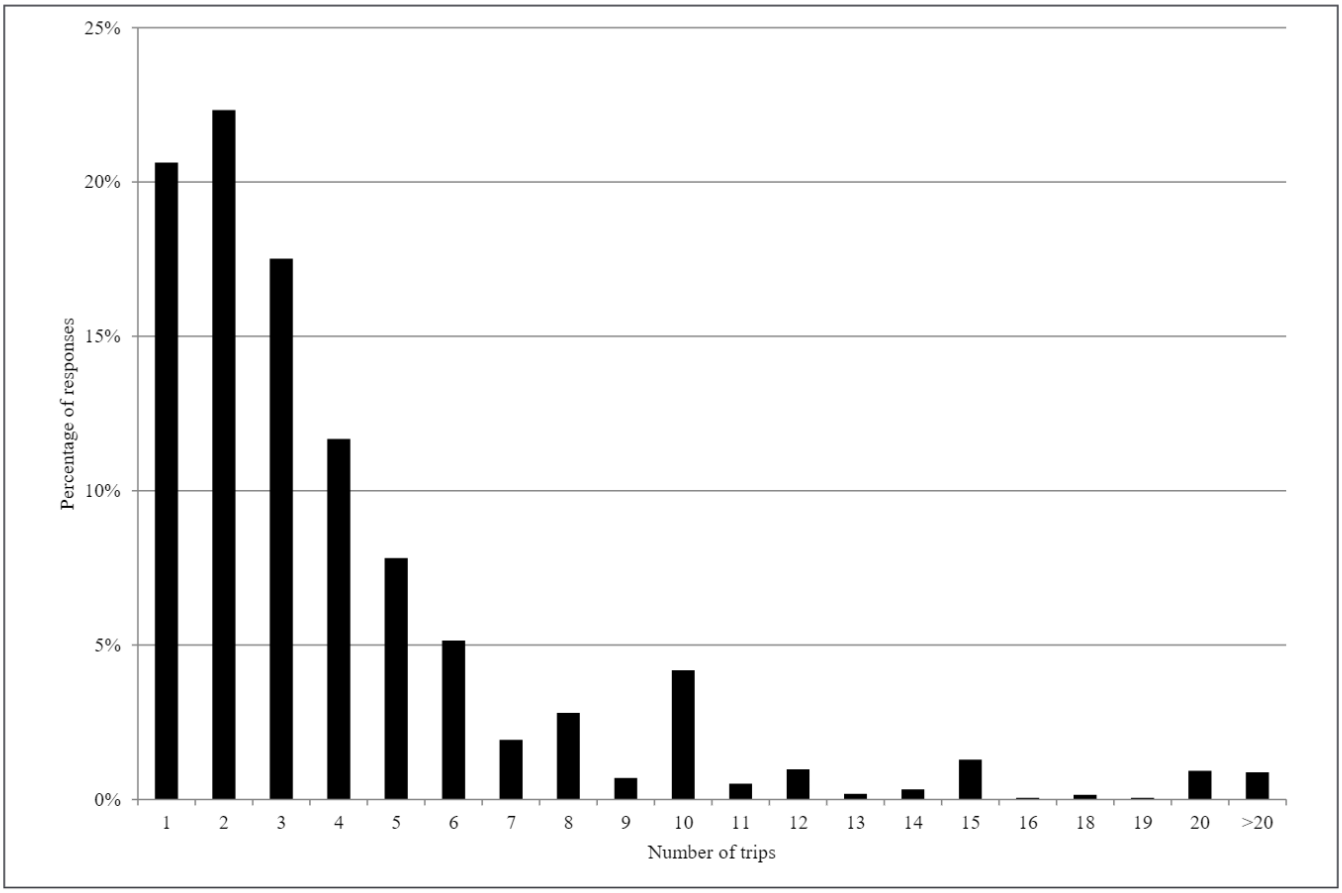

Figure 25.–Number of subsistence fishing trips for halibut, by percentage of total reported trips in Alaska, 2020.

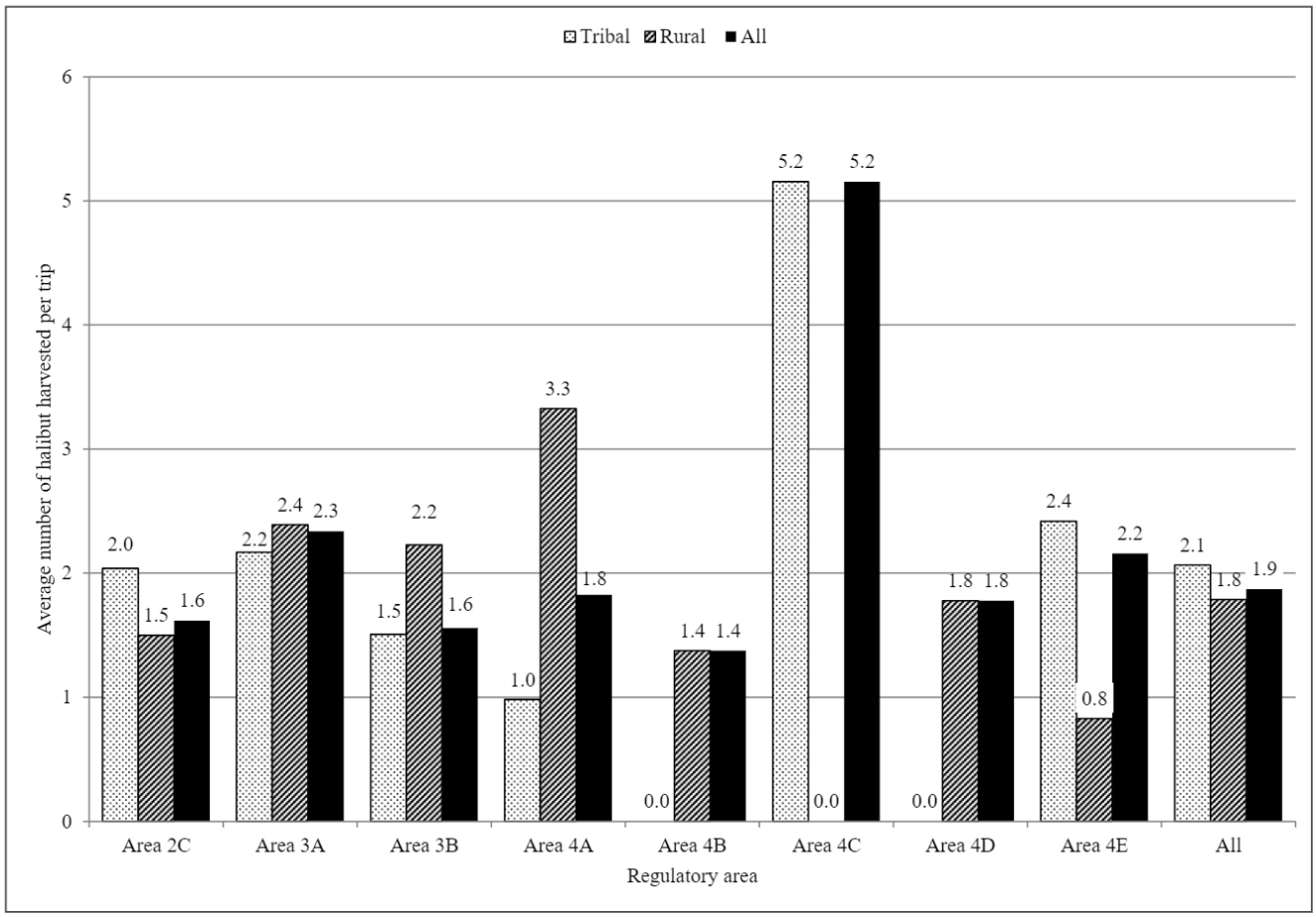

Figure 26.–Average number of halibut harvested per subsistence fishing trip, by regulatory area and SHARC type in Alaska, 2020.

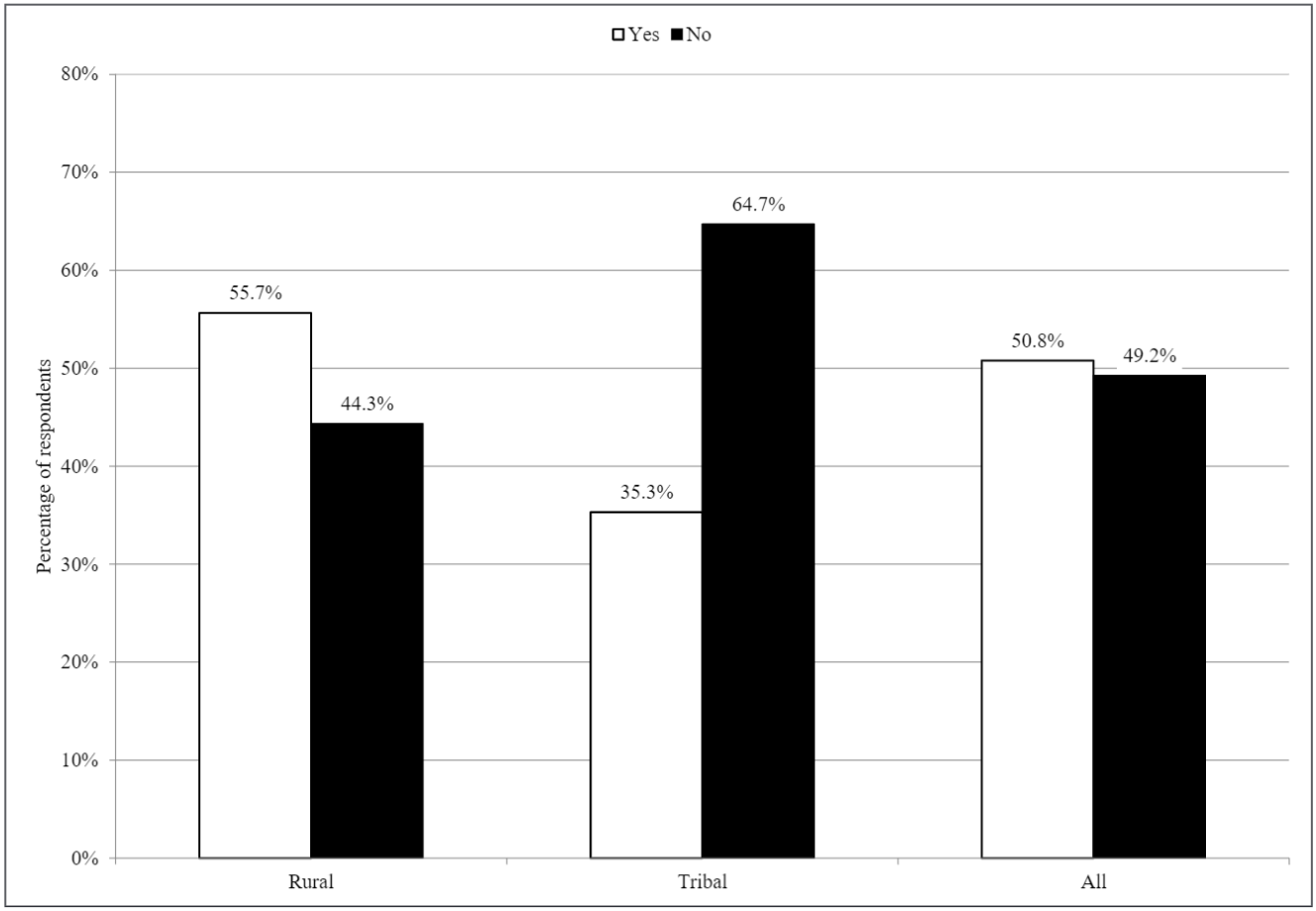

Figure 27.–Responses to question, “Did your household get all of the halibut it needed in 2020?”

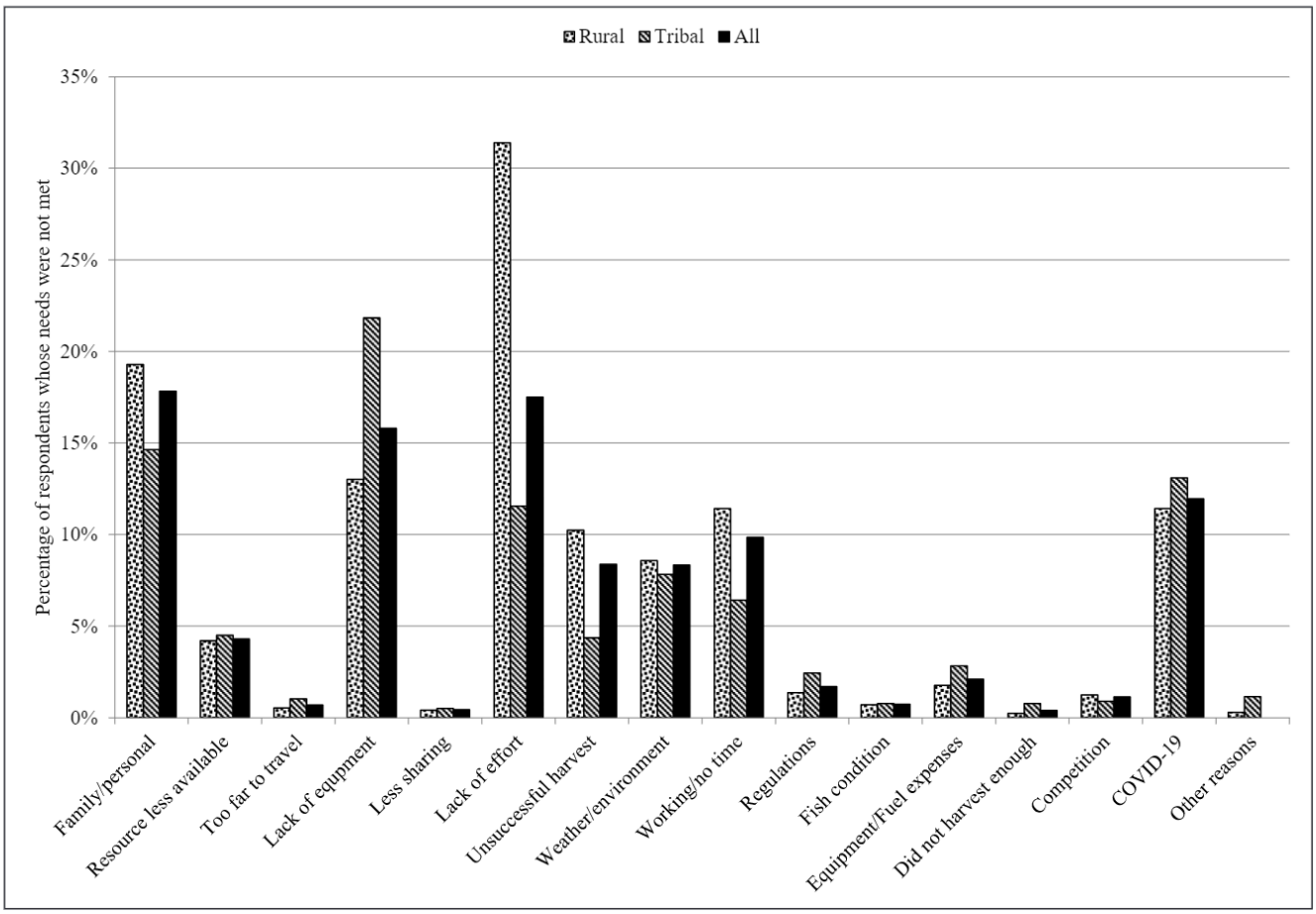

Figure 28.–Reasons needs not met, rural, tribal, and all SHARC holders.

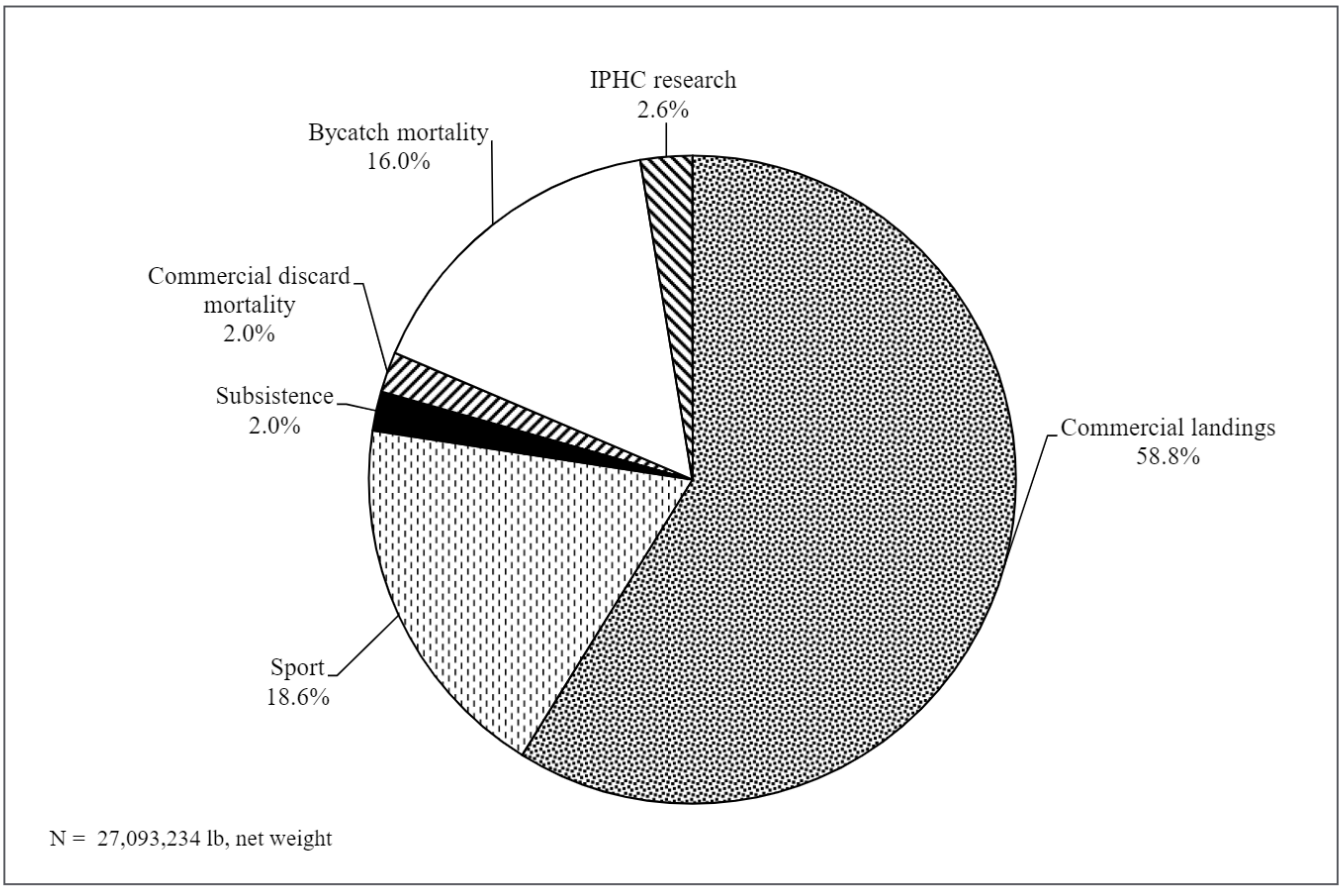

Figure 29.–Halibut removals, Alaska, 2020.

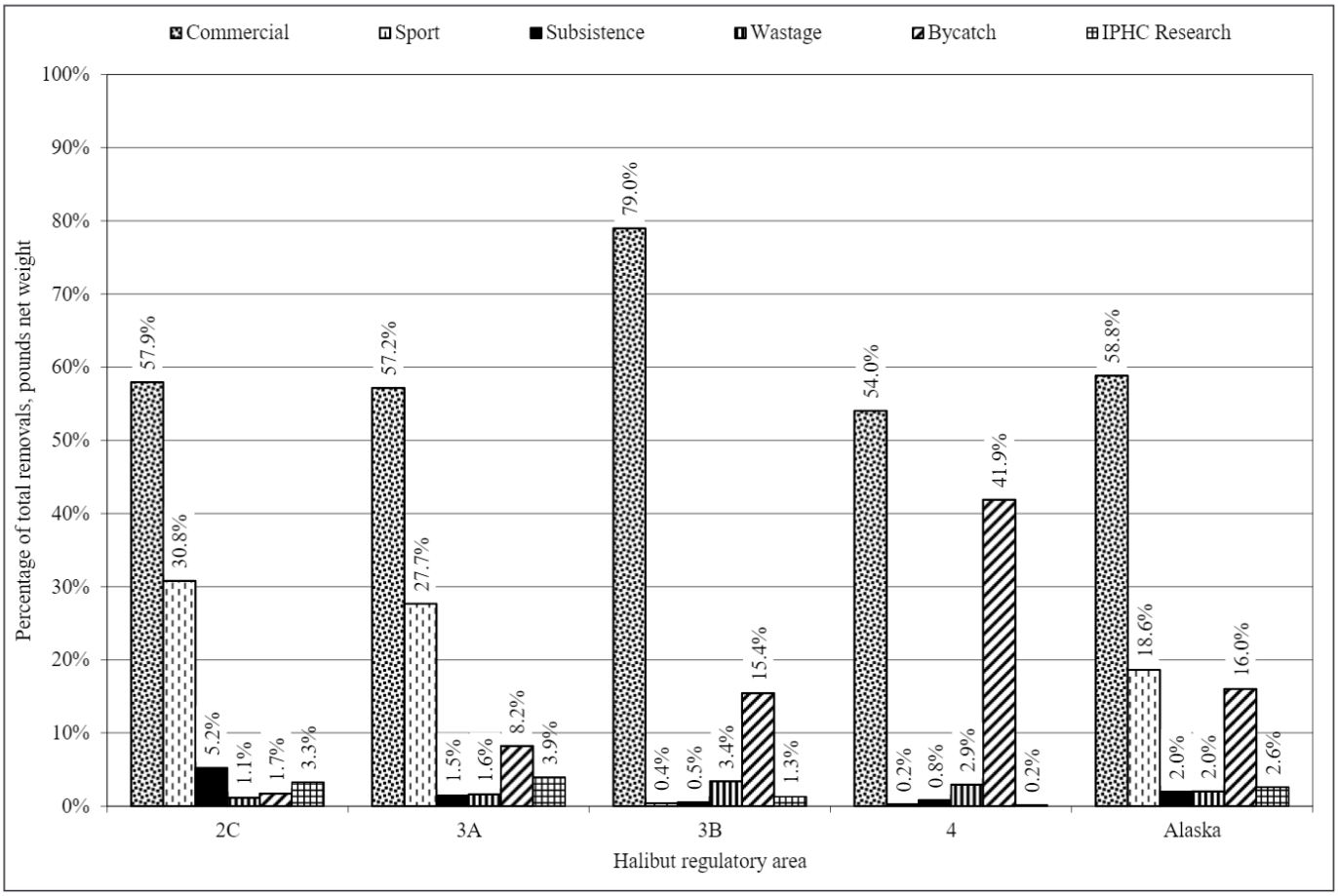

Figure 30.–Halibut removals in Alaska, by regulatory area and removal category, 2020.

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APPENDIX A–LIST OF ELIGIBLE TRIBES AND RURAL COMMUNITIES, 2003 (FROM FEDERAL REGISTER)

Chichagof Island at 57°22′03″ N. lat., 135°43′00″ W. long., and

(B) A line from Chichagof Island at 57°22′35″ N. lat., 135°41′18″ W. long. to Baranof Island at 57°22′17″ N. lat., 135°40′57″ W. lat.; and

(C) That is enclosed on the south and west by a line from Sitka Point at 56°59′23″ N. lat., 135°49′34″ W. long., to Hanus Point at 56°51′55″ N. lat., 135°30′30″ W. long.,

(D) To the green day marker in Dorothy Narrows at 56°49′17″ N. lat., 135°22′45″ W. long. to Baranof Island at 56°49′17″ N. lat., 135°22′36″ W. long.

(2) A person using a vessel greater than 35 ft (10.7 m) in overall length, as defined at 50 CFR 300.61, is prohibited from fishing for IFQ halibut with setline gear, as defined at 50 CFR 300.61, within Sitka Sound as defined in paragraph (d)(1)(i) of this section.

(3) A person using a vessel less than or equal to 35 ft (10.7 m) in overall length, as defined at 50 CFR 300.61:

(i) Is prohibited from fishing for IFQ halibut with setline gear within Sitka Sound, as defined in paragraph (d)(1)(ii) of this section, from June 1 through August 31; and

(ii) Is prohibited, during the remainder of the designated IFQ season, from retaining more than 2,000 lb (0.91 mt) of IFQ halibut within Sitka Sound, as defined in paragraph (d)(1)(ii) of this section, per IFQ fishing trip, as defined in 50 CFR 300.61.

(4) No charter vessel, as defined at 50 CFR 300.61, shall engage in sport fishing, as defined at 50 CFR 300.61(b), for halibut within Sitka Sound, as defined in paragraph (d)(1)(ii) of this section, from June 1 through August 31.

(i) No charter vessel shall retain halibut caught while engaged in sport fishing, as defined at 50 CFR 300.61(b), for other species, within Sitka Sound, as defined in paragraph (d)(1)(ii) of this section, from June 1 through August 31.

(ii) Notwithstanding paragraphs (d)(4) and (d)(4)(i) of this section, halibut harvested outside Sitka Sound, as defined in (d)(1)(ii) of this section, may be retained onboard a charter vessel engaged in sport fishing, as defined in 50 CFR 300.61(b), for other species within Sitka Sound, as defined in paragraph (d)(1)(ii) of this section, from June 1 through August 31.

(e) Sitka Pinnacles Marine Reserve. (1) For purposes of this paragraph (e), the Sitka Pinnacles Marine Reserve means an area totaling 2.5 square nm off Cape Edgecumbe, defined by straight lines connecting the following points in a counterclockwise manner:

56°55.5′N lat., 135°54.0′W long;
56°57.0′N lat., 135°54.0′W long;
56°57.0′N lat., 135°57.0′W long;
56°55.5′N lat., 135°57.0′W long.

(2) No person shall engage in commercial, sport or subsistence fishing, as defined at § 300.61, for halibut within the Sitka Pinnacles Marine Reserve.

(3) No person shall anchor a vessel within the Sitka Pinnacles Marine Reserve if halibut is on board.

(f) *Subsistence fishing in and off Alaska.* No person shall engage in subsistence fishing for halibut unless that person meets the requirements in paragraphs (f)(1) or (f)(2) of this section.

(1) A person is eligible to harvest subsistence halibut if he or she is a rural resident of a community with customary and traditional uses of halibut listed in the following table:

HALIBUT REGULATORY AREA 2C

Rural Community	Organized Entity
Angoon	Municipality
Coffman Cove	Municipality
Craig	Municipality
Edna Bay	Census Designated Place
Elfin Cove	Census Designated Place
Gustavus	Census Designated Place
Haines	Municipality
Hollis	Census Designated Place
Hoonah	Municipality
Hydaburg	Municipality
Hyder	Census Designated Place
Kake	Municipality
Kasaan	Municipality
Klawock	Municipality
Klukwan	Census Designated Place
Metlakatla	Census Designated Place
Meyers Chuck	Census Designated Place
Pelican	Municipality
Petersburg	Municipality
Point Baker	Census Designated Place
Port Alexander	Municipality
Port Protection	Census Designated Place
Saxman	Municipality
Sitka	Municipality
Skagway	Municipality
Tenakee Springs	Municipality
Thorne Bay	Municipality
Whale Pass	Census Designated Place
Wrangell	Municipality

HALIBUT REGULATORY AREA 3A

Rural Community	Organized Entity
Akhiok	Municipality
Chenega Bay	Census Designated Place
Cordova	Municipality
Karluk	Census Designated Place
Kodiak City	Municipality
Larsen Bay	Municipality
Nanwalek	Census Designated Place
Old Harbor	Municipality
Ouzinkie	Municipality
Port Graham	Census Designated Place
Port Lions	Municipality
Seldovia	Municipality
Tatitlek	Census Designated Place
Yakutat	Municipality

HALIBUT REGULATORY AREA 3B

Rural Community	Organized Entity
Chignik Bay	Municipality
Chignik Lagoon	Census Designated Place
Chignik Lake	Census Designated Place
Cold Bay	Municipality
False Pass	Municipality
Ivanof Bay	Census Designated Place
King Cove	Municipality
Nelson Lagoon	Census Designated Place
Perryville	Census Designated Place
Sand Point	Municipality

HALIBUT REGULATORY AREA 4A

Rural Community	Organized Entity
Akutan	Municipality
Nikolski	Census Designated Place
Unalaska	Municipality

HALIBUT REGULATORY AREA 4B

Rural Community	Organized Entity
Adak	Census Designated Place
Atka	Municipality

HALIBUT REGULATORY AREA 4C

Rural Community	Organized Entity
St. George	Municipality
St. Paul	Municipality

HALIBUT REGULATORY AREA 4D

Rural Community	Organized Entity
Gambell	Municipality
Savoonga	Municipality

HALIBUT REGULATORY AREA 4D—Continued

Rural Community	Organized Entity
Diomede (Inalik)	Municipality

HALIBUT REGULATORY AREA 4E

Rural Community	Organized Entity
Alakanuk	Municipality
Aleknegik	Municipality
Bethel	Municipality
Brevig Mission	Municipality
Chefornak	Municipality
Chevak	Municipality
Clark's Point	Municipality
Council	Census Designated Place
Dillingham	Municipality
Eek	Municipality
Egegik	Municipality
Elim	Municipality
Emmonak	Municipality
Golovin	Municipality
Goodnews Bay	Municipality
Hooper Bay	Municipality
King Salmon	Census Designated Place
Kipnuk	Census Designated Place
Kongiganak	Census Designated Place
Kotlik	Municipality
Koyuk	Municipality
Kwigillingok	Census Designated Place
Levelock	Census Designated Place
Manokotak	Municipality
Mekoryak	Municipality
Naknek	Census Designated Place
Napakiak	Municipality
Napaskiak	Municipality
Newtok	Census Designated Place
Nightmute	Municipality
Nome	Municipality
Oscarville	Census Designated Place
Pilot Point	Municipality
Platinum	Municipality
Port Heiden	Municipality
Quinhagak	Municipality
Scammon Bay	Municipality
Shaktoolik	Municipality
Sheldon Point (Nunam Iqua).	Municipality
Shishmaref	Municipality
Solomon	Census Designated Place
South Naknek	Census Designated Place
St. Michael	Municipality
Stebbins	Municipality
Teller	Municipality
Togiak	Municipality
Toksook Bay	Municipality
Tuntutuliak	Census Designated Place
Tununak	Census Designated Place

HALIBUT REGULATORY AREA 4E—Continued

Rural Community	Organized Entity
Twin Hills	Census Designated Place
Ugashik	Census Designated Place
Unalakleet	Municipality
Wales	Municipality
White Mountain	Municipality

(2) A person is eligible to harvest subsistence halibut if he or she is a member of an Alaska Native tribe with customary and traditional uses of halibut listed in the following table:

HALIBUT REGULATORY AREA 2C

Place with Tribal Headquarters	Organized Tribal Entity
Angoon	Angoon Community Association
Craig	Craig Community Association
Haines	Chilkoot Indian Association
Hoonah	Hoonah Indian Association
Hydaburg	Hydaburg Cooperative Association
Juneau	Aukquan Traditional Council Central Council Tlingit and Haida Indian Tribes Douglas Indian Association
Kake	Organized Village of Kake
Kasaan	Organized Village of Kasaan
Ketchikan	Ketchikan Indian Corporation
Klawock	Klawock Cooperative Association
Klukwan	Chilkat Indian Village
Metlakatla	Metlakatla Indian Community, Annette Island Reserve
Petersburg	Petersburg Indian Association
Saxman	Organized Village of Saxman
Sitka	Sitka Tribe of Alaska
Skagway	Skagway Village
Wrangell	Wrangell Cooperative Association

HALIBUT REGULATORY AREA 3A

Place with Tribal Headquarters	Organized Tribal Entity
Akhiok	Native Village of Akhiok
Chenega Bay	Native Village of Chanega

HALIBUT REGULATORY AREA 3A—Continued

Place with Tribal Headquarters	Organized Tribal Entity
Cordova	Native Village of Eyak
Karluk	Native Village of Karluk
Kenai-Soldotna	Kenaitze Indian Tribe Village of Salamatoff
Kodiak City	Lesnoi Village (Woody Island) Native Village of Afognak Shoonaq' Tribe of Kodiak
Larsen Bay	Native Village of Larsen Bay
Nanwalek	Native Village of Nanwalek
Ninilchik	Ninilchik Village
Old Harbor	Village of Old Harbor
Ouzinkie	Native Village of Ouzinkie
Port Graham	Native Village of Port Graham
Port Lions	Native Village of Port Lions
Seldovia	Seldovia Village Tribe
Tatitlek	Native Village of Tatitlek
Yakutat	Yakutat Tlingit Tribe

HALIBUT REGULATORY AREA 3B

Place with Tribal Headquarters	Organized Tribal Entity
Chignik Bay	Native Village of Chignik
Chignik Lagoon	Native Village of Chignik Lagoon
Chignik Lake	Chignik Lake Village
False Pass	Native Village of False Pass
Ivanof Bay	Ivanoff Bay Village
King Cove	Agdaagux Tribe of King Cove Native Village of Belkofski
Nelson Lagoon	Native Village of Nelson Lagoon
Perryville	Native Village of Perryville
Sand Point	Pauloff Harbor Village Native Village of Unga Qagan Toyagungin Tribe of Sand Point Village

HALIBUT REGULATORY AREA 4A

Place with Tribal Headquarters	Organized Tribal Entity
Akutan	Native Village of Akutan
Nikolski	Native Village of Nikolski
Unalaska	Qawalingin Tribe of Unalaska

HALIBUT REGULATORY AREA 4B

Place with Tribal Headquarters	Organized Tribal Entity
Atka	Native Village of Atka

HALIBUT REGULATORY AREA 4C

Place with Tribal Headquarters	Organized Tribal Entity
St. George	Pribilof Islands Aleut Communities of St. Paul Island and St. George Island
St. Paul	

HALIBUT REGULATORY AREA 4D

Place with Tribal Headquarters	Organized Tribal Entity
Gambell	Native Village of Gambell
Savoonga	Native Village of Savoonga
Diomede (Inalik)	Native Village of Diomede (Inalik)

HALIBUT REGULATORY AREA 4E

Place with Tribal Headquarters	Organized Tribal Entity
Alakanuk	Village of Alakanuk
Aleknagik	Native Village of Aleknagik
Bethel	Orutsararmuit Native Village
Brevig Mission	Native Village of Brevig Mission
Chefornak	Village of Chefornak
Chevak	Chevak Native Village
Clark's Point	Village of Clark's Point
Council	Native Village of Council
Dillingham	Native Village of Dillingham
	Native Village of Ekuk
	Native Village of Kanakanak
Eek	Native Village of Eek
Egegik	Egegik Village
	Village of Kanatak
Elim	Native Village of Elim
Emmonak	Chuloonawick Native Village
	Emmonak Village
Golovin	Chinik Eskimo Community
Goodnews Bay	Native Village of Goodnews Bay
Hooper Bay	Native Village of Hooper Bay
	Native Village of Paimiut
King Salmon	King Salmon Tribal Council
Kipnuk	Native Village of Kipnuk
Kongiganak	Native Village of Kongiganak
Kotlik	Native Village of Hamilton
	Village of Bill Moore's Slough
	Village of Kotlik
Koyuk	Native Village of Koyuk
Kwigillingok	Native Village of Kwigillingok
Levelock	Levelock Village
Manokotak	Manokotak Village
Mekoryak	Native Village of Mekoryak
Naknek	Naknek Native Village
Napakiak	Native Village of Napakiak
Napaskiak	Native Village of Napaskiak
Newtok	Newtok Village
Nightmute	Native Village of Nightmute
	Umkumiute Native Village
Nome	King Island Native Community
	Nome Eskimo Community
Oscarville	Oscarville Traditional Village
Pilot Point	Native Village of Pilot Point
Platinum	Platinum Traditional Village
Port Heiden	Native Village of Port Heiden
Quinhagak	Native Village of Kwinhagak
Scammon Bay	Native Village of Scammon Bay
Shaktoolik	Native Village of Shaktoolik
Sheldon Point (Nuna Iqua).	Native Village of Sheldon's Point
Shishmaref	Native Village of Shishmaref
Solomon	Village of Solomon
South Naknek	South Naknek Village
St. Michael	Native Village of Saint Michael
Stebbins	Stebbins Community Association
Teller	Native Village of Mary's Igloo
	Native Village of Teller
Togiak	Traditional Village of Togiak
Toksook Bay	Native Village of Toksook Bay
Tuntutuliak	Native Village of Tuntutuliak
Tununak	Native Village of Tununak
Twin Hills	Twin Hills Village
Ugashik	Ugashik Village
Unalakleet	Native Village of Unalakleet
Wales	Native Village of Wales
White Mountain	Native Village of White Mountain

(g) *Limitations on subsistence fishing.* Subsistence fishing for halibut may be conducted only by persons who qualify for such fishing pursuant to paragraph (f) of this section and who hold a valid subsistence halibut registration certificate in that person's name issued by NMFS pursuant to paragraph (h) of this section, provided that such fishing is consistent with the following limitations.

(1) Subsistence fishing is limited to setline gear and hand-held gear, including longline, handline, rod and reel, spear, jig and hand-troll gear.

(i) Subsistence fishing gear must not have more than 30 hooks per person registered in accordance with paragraph (h) of this section and on board the vessel from which gear is being set or retrieved.

(ii) All setline gear marker buoys carried on board or used by any vessel regulated under this section shall be marked with the following: first initial, last name, and address (street, city, and state), followed by the letter "S" to indicate that it is used to harvest subsistence halibut.

(iii) Markings on setline marker buoys shall be in characters at least 4 inches (10.16 cm) in height and 0.5 inch (1.27 cm) in width in a contrasting color visible above the water line and shall be maintained so the markings are clearly visible.

(2) The daily retention of subsistence halibut in rural areas is limited to no more than 20 fish per person eligible to conduct subsistence fishing for halibut under paragraph (g) of this section,

APPENDIX B–SURVEY INSTRUMENT

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Fold on the dotted lines to mail in your survey

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SUBSISTENCE DIVISION
333 RASPBERRY RD
ANCHORAGE AK 99518-9961

<BARCODE>

Tape Closed

SUBSISTENCE HALIBUT HARVEST SURVEY 2020

National Marine Fisheries Service &
AK Dept. Fish & Game/Division of Subsistence
(please make address changes as needed)

2020

SHARC Holder's Name

First Name M.I. Last Name

Mailing Address

Number and street or PO Box City State Zip code

Community of Residence	Daytime Telephone	SHARC Number
Tribe (if you are on a tribal role)		Exp. Date:

Please answer each question to the best of your knowledge

1. Did your household get all of the halibut it needed in 2020? ☐ Yes ☐ No
(Please check one, include only halibut you harvested or received)

1a. If not, why was your household unable to get all of the halibut it needed? *(Please write the reasons in the space below.)*

2. Did you **subsistence** fish for halibut during 2020? ☐ Yes ☐ No
(Please check one. If No, skip to question #5)

3. How many halibut did you harvest with set hook gear (long-line, skate) while **subsistence fishing** during 2020?
("Set hook gear" is hook-and-line set with anchors and buoys. Please write in both the number and pounds of halibut. Pounds should be round (live) weight.)

3a. Number of halibut	3b. Pounds of halibut	3c. How many hooks did you usually set?	3d. Water body, bay or sound usually fished

4. How many halibut did you harvest with hook-and-rod or hand-held lines while subsistence fishing during 2020?
(Please write in both the number and pounds of halibut. Do not count fish reported in Question 7. Pounds should be round (live) weight.)

4a. Number of halibut	4b. Pounds of halibut	4c. Water body, bay or sound usually fished

5. How many trips did you take to fish for subsistence halibut in 2020?
(Please include trips where halibut was targeted but none were caught)

6. Did you **sport fish** for halibut during 2020? (Please check one) ☐ Yes ☐ No

7. How many halibut did you harvest while **sport fishing** during 2020?
(Please write in both the number and pounds of halibut. Do not count fish reported in Question 3. Pounds should be round (live) weight.)

7a. Number of Halibut	7b. Pounds of Halibut	7c. Water body, bay or sound usually fished

THANK YOU!

You may complete this survey online at: https://arcg.is/1WuSD80
Or mail to:
Alaska Department of Fish & Game
Division of Subsistence
333 Raspberry Rd
Anchorage, Alaska 99518

QUESTIONS?

Regarding the survey: ADF&G 1-907-267-2353 or dfg.sub.halibut@alaska.gov

Regarding your SHARC card: NMFS at 1-800-304-4846 (option 2)

Under AS 16.05.815, Alaska state law prevents the transfer of certain information based on confidentiality. Such information includes, but is not limited to, personal information contained in fish and wildlife harvest and usage data; fish tickets; fish ticket computer runs; intents to operate; processor annual reports; log books or other catch records; and individual or vessel harvest records that are correlated to their harvest or effort. Individual data collected in this survey is confidential under this statute.

INSTRUCTIONS FOR SUBSISTENCE HALIBUT HARVEST SURVEY, 2020

TO AVOID FUTURE NOTIFICATIONS, PLEASE RESPOND NOW. PLEASE COMPLETE AND RETURN THE SURVEY EVEN IF YOUR SHARC HAS EXPIRED.

Question 1.

- Answer this question even if you didn't fish for halibut yourself.
- If you do not use halibut and have no need for halibut (including sharing obligations), mark "yes".
- If you received or caught enough halibut for your household's needs, including sharing obligations, mark "yes", otherwise mark "no".

Question 2.

- Mark "yes" even if you fished but were unsuccessful

Questions 3 and 4.

- Include only those fish harvested by you, the individual fisher (SHARC holder). If you fished with someone else and split the catch, count only your share of the catch. Other household members who harvested halibut should fill out their own forms.
- Include fish that you harvested and kept for your household's use AND fish you harvested and gave away or traded. DO NOT include fish that you received from someone else.
- Identify both the number and pounds of halibut harvested; if you cannot provide both, please provide what you are able. Pounds should be **ROUND (LIVE) WEIGHT**. If you only know the dressed weight of your halibut harvest, record that number and make a note of "dressed, head on" (equals about 88% of round weight) or "dressed, head off" (equals about 75% of round weight).
- Number of hooks: write in the number that you use most often each time you set a line. That is, the number of hooks you usually have on your longline/skate.
- Water body, bay, or sound: record the general location where you did most of your subsistence halibut fishing (for example, "Chiniak Bay," "Sitka Sound"). If you used more than one general area for a significant portion of your catch, please provide the portion of your harvest from each.

Question 5.

- Enter the number of trips taken for subsistence halibut. Please include all trips where you subsistence fished for halibut, even if you were not successful.

Questions 6 and 7.

- Sport fishing for halibut requires an Alaska sport fishing license. Sport fishers for halibut must fish with a line attached to a rod or pole. There is a limit of two hooks. The daily bag limit is two halibut and the possession limit is four halibut.

Do you still have questions?

Call the National Marine Fisheries Service at: 1-800-304-4846 (option 2);
Or visit http://www.fakr.noaa.gov/ram/subsistence/halibut.htm;
Or call ADF&G Division of Subsistence at: 907-267-2353;
Or contact the Division of Subsistence via e-mail at: dfg.sub.halibut@alaska.gov.

THANK YOU FOR PARTICIPATING IN THIS SURVEY!

ALASKA DEPARTMENT OF FISH & GAME
Subsistence Halibut Survey
Division of Subsistence
333 Raspberry Rd.
Anchorage, Alaska 99518-1599

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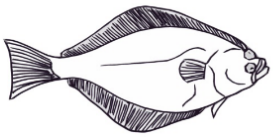
SUBSISTENCE HALIBUT HARVEST SURVEY 2020
NATIONAL MARINE FISHERIES SERVICE &
ALASKA DEPARTMENT OF FISH & GAME/DIVISION OF SUBSISTENCE



2020

APPENDIX C–SET OF FREQUENTLY ASKED QUESTIONS AND RESPONSES

RAM
FAQ's for Subsistence Halibut Harvest Survey

The following is a list of standard responses that may be given to common questions regarding the Subsistence Halibut Harvest Survey. Any question that cannot be answered by the responses below or by other personnel in RAM division may be directed to ADF&G Division of Subsistence at the phone number(s) indicated at the bottom of the page.

1. I got my SHARC from NMFS. Why is this survey being done by ADF&G?

- NMFS contracted with ADF&G Division of Subsistence to conduct this survey because the Division of Subsistence has a lot of experience in collecting and analyzing subsistence harvest data. They have staff who are familiar with local communities and subsistence harvest patterns.

2. What happens to this information after I send it in?

- The survey responses are entered into a database by ADF&G. They will use the responses to estimate and report subsistence harvests at a community level. NMFS will receive a report from ADF&G with the survey results. The report will not include individual responses.

3. Why do you need my birth date?

- ADF&G needs birth date only to distinguish between individuals who may have the same name. For instance, there may be many John Smith's in area 2C. Providing birth date prevents ADF&G from counting the same person more than once or even counting multiple people as the same person. However, ADF&G is required to maintain birth date confidential under the Privacy Act.

4. I live in an isolated area near [insert]. What do I put down as my Community of Residence?

- Your Community of Residence is defined as the geographical location of your home. If you live in a remote location, you may list the community nearest your home. "Community of residence" is not necessarily the same as where you receive your mail.

5. The survey asks me to put down Pounds of Halibut. Does this mean I should weigh all my halibut on a scale?

- No. While an actual weight using a scale would be helpful to ADF&G, you only need to estimate the total pounds of halibut you harvested. If you know how many halibut you harvested, but have no idea how much they weighed, leave the "pounds" area blank. If you know about how many pounds you harvested but have no idea how many fish you caught, leave the "number" area blank. We will calculate the pounds or number based on standard conversion factors. However, we prefer that you do your best to provide an estimate of both numbers and pounds, because this information is lacking for the subsistence fishery.

6. Should I record the weight of my halibut before or after I process them?

- The survey asks for **ROUND WEIGHT**, which is the weight of the fish BEFORE it is gutted and beheaded. If you only know the approximate weight of the fish after you gutted them, write "dressed, head on" next to the weight (this equals about 88% of round/live weight). If you only know the approximate weight of the fish after you gutted and beheaded them, write "dressed, head off" next to the weight (this equals about 72% of round/live weight).

7. I fish near [insert]. What is the water body, bay, or sound?

- The water body, bay, or sound is the area in which you subsistence fished for halibut. For instance, a subsistence fisher from Sitka might put down that he subsistence fished for halibut in Sitka *Sound* or a subsistence fisher from Kodiak might put down that he subsistence fished for halibut in Chiniak *Bay*. However, a subsistence fisher from Akutan might put down that he subsistence fished for halibut in Unimak Pass, which is neither a bay nor sound but would be classified as a *water body*. Likewise, a subsistence fisher from St. Paul might put down that he subsistence fished for halibut in the Bering Sea, which is also a *water body*. However, the more specific the description, the more helpful it will be to ADF&G.

8. What is a lingcod?

- A lingcod is a relatively long fish that ranges from black, to grey, to greenish, to bluish-purple, usually with dark brown or copper blotches arranged in clusters, and has a large mouth with 18 large teeth. For a more accurate description and local or tribal names, you can refer to the sheet distributed by ADF&G in the original mailing that also contained your Subsistence Halibut Harvest Survey or visit the NMFS website http://www.afsc.noaa.gov/race/media/photo_gallery/fish_by_family.htm.

9. What is a rockfish?

- These fish are characterized by having bony plates or spines on the head and body and a large mouth. Some species are brightly colored, and many are difficult to distinguish from one another. They are also known as sea bass, black bass, and red snapper. For a more accurate description and local or tribal names, you can refer to the instruction sheet distributed by ADF&G in the original mailing that also contained your Subsistence Halibut Harvest Survey or visit the NMFS website http://www.afsc.noaa.gov/race/media/photo_gallery/fish_by_family.htm.

10. What is "sport fishing"?

- Sport fishing is defined as all fishing other than commercial fishing, personal use fishing, and subsistence fishing. Typically, sport fishing is conducted with a rod and reel using no more than 2 hooks under ADF&G regulations.

11. Why do I need to report my sport-caught halibut on this subsistence harvest survey form (Question 6)?

- The survey is designed to prevent double-counting of harvested halibut. If you fish for halibut with a rod and reel and have a sport fishing license, you may include your harvests in Question 2 if you consider your activity to be subsistence fishing, or under Question 6 if you consider it sport fishing. DO NOT INCLUDE THE SAME FISH IN YOUR REPSONSES TO QUESTIONS 2 AND 6. We will exclude responses to Question 6 from our estimate of subsistence halibut harvests. Holders of sport fishing licenses may receive a survey from ADF&G about their sport harvests. If you do, you should report the halibut you record in Question 6 in that survey too, but do not include the halibut you record in Question 2.

All other inquiries regarding the survey should be directed to ADF&G Division of Subsistence at (907) 267-2353 (Anchorage) or 907-465-3617, or e-mail at subsistence_halibut@fishgame.state.ak.us

APPENDIX D–ADDITIONAL TABLES

Appendix Table D-1.– Estimated subsistence harvests of halibut in Alaska by gear type, 2020.

			Set hook gear			Hook & line or handline			All gear				
Tribal name	Regulatory area	Number of SHARCs issued	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Angoon Community Association	2C	42	6	103	1,631	5	83	1,864	10	186	95.3%	3,495	99.0%
Central Council Tlingit and Haida Indian Tribes	2C	392	121	752	20,351	33	129	1,800	137	881	24.2%	22,151	43.8%
Chilkat Indian Village	2C	11	2	6	90	0	0	0	2	6	0.0%	90	0.0%
Chilkoot Indian Association	2C	34	15	58	1,103	3	4	89	15	61	70.5%	1,192	36.0%
Craig Community Association	2C	31	12	72	2,091	2	8	310	13	80	18.1%	2,401	22.1%
Douglas Indian Association	2C	5											
Hoonah Indian Association	2C	73	28	322	5,517	12	66	1,596	33	389	31.7%	7,113	27.9%
Hydaburg Cooperative Association	2C	25	9	29	1,142	0	0	0	9	29	65.0%	1,142	62.1%
Ketchikan Indian Corporation	2C	343	81	721	13,142	52	342	5,977	100	1,063	19.7%	19,119	19.7%
Klawock Cooperative Association	2C	37	13	78	2,368	4	16	300	17	94	46.5%	2,668	45.5%
Metlakatla Indian Community, Annette Island Rese	2C	71	36	132	3,518	7	6	135	36	138	48.0%	3,653	38.7%
Organized Village of Kake	2C	50	18	119	4,808	2	0	0	18	119	50.0%	4,808	71.4%
Organized Village of Kasaan	2C	1											
Organized Village of Saxman	2C	10	2	0	0	2	0	0	2	0	0.0%	0	0.0%
Petersburg Indian Association	2C	39	11	47	617	8	12	179	11	59	31.2%	796	36.3%
Sitka Tribe of Alaska	2C	146	39	184	5,324	15	17	517	48	201	32.4%	5,841	35.6%
Skagway Village	2C	2											
Wrangell Cooperative Association	2C	50	20	334	6,895	8	12	518	27	346	13.9%	7,413	26.1%
Subtotal, Area 2C	**2C**	**1,362**	**414**	**2,970**	**68,934**	**154**	**696**	**13,374**	**480**	**3,667**	**10.4%**	**82,308**	**14.5%**
Kenaitze Indian Tribe	3A	77	4	44	708	8	39	475	9	83	73.1%	1,183	71.3%
Lesnoi Village (Woody Island)	3A	10	2	6	108	2	10	197	2	16	0.0%	305	0.0%
Native Village of Afognak	3A	14	3	8	131	0	0	0	3	8	0.0%	131	0.0%
Native Village of Akhiok	3A	9	4	9	110	3	3	55	7	11	41.9%	165	33.1%
Native Village of Chenega	3A	14	6	30	566	3	3	34	6	33	33.0%	600	68.2%
Native Village of Eyak	3A	54	18	137	2,537	16	78	1,543	25	215	26.8%	4,080	29.8%
Native Village of Karluk	3A	7	2	0	0	2	14	254	5	14	325.2%	254	325.2%
Native Village of Larsen Bay	3A	27	3	227	750	8	98	1,620	11	325	12.1%	2,370	31.3%
Native Village of Nanwalek	3A	36	12	149	3,991	9	59	478	15	208	47.0%	4,469	43.6%
Native Village of Ouzinkie	3A	8	5	48	810	5	8	210	5	56	0.0%	1,020	0.0%
Native Village of Port Graham	3A	31	17	256	2,233	7	64	848	20	320	47.7%	3,080	22.1%
Native Village of Port Lions	3A	18	7	64	1,363	4	8	216	10	72	28.7%	1,578	33.1%
Native Village of Tatitlek	3A	13	6	38	743	0	0	0	6	38	0.0%	743	0.0%
Ninilchik Village	3A	40	4	41	648	2	18	304	7	59	38.8%	952	30.8%
Seldovia Village Tribe	3A	39	15	160	3,479	9	70	1,250	17	229	49.7%	4,729	61.1%
Sun'aq Tribe of Kodiak (formerly Shoonaq')	3A	83	27	166	3,522	15	46	712	33	212	18.1%	4,234	16.3%
Village of Kanatak	3A	2											
Village of Old Harbor	3A	15	3	10	225	6	23	285	6	33	69.2%	510	62.6%
Village of Salamatoff	3A	17	0	0	0	4	39	647	4	39	75.9%	647	0.0%
Yakutat Tlingit Tribe	3A	31	17	175	4,800	5	18	506	19	193	33.3%	5,306	34.8%
Subtotal, Area 3A	**3A**	**545**	**154**	**1,567**	**26,723**	**107**	**596**	**9,632**	**209**	**2,163**	**10.7%**	**36,355**	**11.4%**
Agdaagux Tribe of King Cove	3B	25	12	69	1,187	12	72	1,635	20	141	32.6%	2,822	71.7%
Chignik Lake Village	3B	2											
Ivanoff Bay Village	3B	2											
Native Village of Belkofski	3B	1											
Native Village of Chignik	3B	2											
Native Village of Chignik Lagoon	3B	5											
Native Village of False Pass	3B	12	0	0	0	11	33	1,155	11	33	90.5%	1,155	116.3%
Native Village of Perryville	3B	6	5	40	590	4	7	98	6	47	0.0%	688	0.0%

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Appendix Table D-1.–Page 2 of 4.

Tribal name	Regulatory area	Number of SHARCs issued	Set hook gear			Hook & line or handline			All gear				
			Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Native Village of Unga	3B	6	1	20	90	0	0	0	1	20	0.0%	90	0.0%
Pauloff Harbor Village	3B	57	22	154	2,006	18	75	1,217	35	228	50.0%	3,223	73.8%
Qagan Toyagungin Tribe of Sand Point Village	3B	277	42	223	3,418	34	93	2,144	76	315	62.4%	5,562	67.4%
Subtotal, Area 3B	**3B**	**395**	**84**	**515**	**7,478**	**79**	**280**	**6,259**	**151**	**795**	**28.4%**	**13,738**	**34.6%**
Native Village of Akutan	4A	47	9	49	3,008	9	102	3,244	15	150	149.0%	6,251	143.3%
Qawalingin Tribe of Unalaska	4A	22	0	0	0	7	2	46	7	2	0.0%	46	0.0%
Subtotal, Area 4A	**4A**	**69**	**9**	**49**	**3,008**	**16**	**104**	**3,290**	**22**	**152**	**136.9%**	**6,297**	**132.4%**
Native Village of Atka	4B	2											
Subtotal, Area 4B	**4B**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0%**	**0**	**0.0%**
Pribilof Islands Aleut Community of St. George	4C	2											
Pribilof Islands Aleut Community of St. Paul	4C	22	1	100	3,000	11	15	300	12	115	0.0%	3,300	0.0%
Subtotal, Area 4C	**4C**	**24**	**2**	**119**	**3,450**	**11**	**15**	**300**	**13**	**134**	**0.0%**	**3,750**	**0.0%**
Native Village of Diomede (Inalik)	4D	1											
Native Village of Savoonga	4D	1											
Subtotal, Area 4D	**4D**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0%**	**0**	**0.0%**
Chevak Native Village (Kashunamiut)	4E	1											
Chinik Eskimo Community	4E	2											
Emmonak Village	4E	1											
Kasigluk Native Village	4E	1											
King Island Native Community	4E	1											
Manokotak Village	4E	2											
Naknek Native Village	4E	4											
Native Village of Aleknagik	4E	5											
Native Village of Council	4E	1											
Native Village of Dillingham (Curyung)	4E	7	2	3	38	2	0	0	2	3	0.0%	38	0.0%
Native Village of Eek	4E	1											
Native Village of Ekuk	4E	4											
Native Village of Hooper Bay	4E	6	0	0	0	6	6	180	6	6	0.0%	180	0.0%
Native Village of Kipnuk	4E	1											
Native Village of Koyuk	4E	2											
Native Village of Mekoryuk	4E	1											
Native Village of Napaskiak	4E	2											
Native Village of Nightmute	4E	15	0	0	0	14	332	5,029	14	332	0.0%	5,029	0.0%
Native Village of Scammon Bay	4E	5											
Native Village of Toksook Bay (Nunakauyak)	4E	35	0	0	0	19	211	1,535	19	211	111.1%	1,535	109.9%
Native Village of Tununak	4E	96	7	66	986	82	1,470	20,277	82	1,536	20.0%	21,263	54.9%
Native Village of Unalakleet	4E	1											
Newtok Village	4E	1											
Nome Eskimo Community	4E	1											
Orutsararmiut Native Village	4E	3											
Umkumiute Native Village	4E	3											
Village of Alakanuk	4E	2											
Village of Chefornak	4E	2											
Village of Clark's Point	4E	4											
Subtotal, Area 4E	**4E**	**210**	**17**	**71**	**1,061**	**135**	**2,127**	**29,146**	**140**	**2,198**	**16.2%**	**30,208**	**38.2%**
Tribal subtotal		**2,609**	**679**	**5,290**	**110,654**	**502**	**3,818**	**62,002**	**1,015**	**9,109**	**7.0%**	**172,656**	**11.1%**
Angoon	2C	18	6	67	1,209	3	15	349	9	82	47.6%	1,558	39.0%
Coffman Cove	2C	36	8	21	785	8	18	207	12	39	19.9%	992	21.8%
Craig	2C	237	98	467	10,435	33	90	2,019	103	556	15.2%	12,455	18.0%
Edna Bay	2C	13	11	36	1,410	1	2	113	11	38	10.3%	1,523	15.4%

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Appendix Table D-1.–Page 3 of 4.

Tribal name	Regulatory area	Number of SHARCs issued	Set hook gear: Estimated number respondents fished	Set hook gear: Estimated number halibut harvested	Set hook gear: Estimated pounds halibut harvested	Hook & line or handline: Estimated number respondents fished	Hook & line or handline: Estimated number halibut harvested	Hook & line or handline: Estimated pounds halibut harvested	All gear: Estimated number respondents fished	All gear: Estimated number halibut harvested	All gear: Confidence interval for number of halibut	All gear: Estimated pounds halibut harvested	All gear: Confidence interval for pounds of halibut
Elfin Cove	2C	6	2	0	0	2	0	0	2	0	0.0%	0	0.0%
Excursion Inlet	2C	5											
Gustavus	2C	57	21	185	3,961	9	39	708	27	223	31.3%	4,670	38.0%
Haines	2C	369	206	968	17,792	47	54	935	225	1,021	10.4%	18,727	11.7%
Hollis	2C	41	13	51	1,226	4	21	145	15	72	21.0%	1,370	23.5%
Hoonah	2C	68	13	84	2,441	4	10	224	14	94	23.4%	2,665	18.5%
Hydaburg	2C	7	1	13	616	0	0	0	1	13	0.0%	616	0.0%
Hyder	2C	9	3	23	776	3	1	19	4	24	104.2%	795	126.0%
Juneau	2C	1											
Kake	2C	34	14	80	2,174	6	10	218	17	91	42.4%	2,391	36.3%
Kasaan	2C	8	2	2	105	3	0	0	3	2	0.0%	105	0.0%
Klawock	2C	116	48	293	5,697	23	60	860	57	353	20.3%	6,558	21.0%
Klukwan	2C	4											
Metlakatla	2C	34	11	61	1,444	6	73	664	12	134	71.8%	2,108	66.3%
Meyers Chuck	2C	8	3	19	465	0	0	0	3	19	0.0%	465	0.0%
Naukati Bay	2C	44	19	54	1,710	9	5	78	19	59	35.1%	1,787	33.1%
Pelican	2C	24	14	56	1,491	5	5	113	14	60	45.7%	1,604	54.1%
Petersburg	2C	727	267	1,583	28,638	151	554	10,972	343	2,138	8.0%	39,609	8.4%
Point Baker	2C	8	5	17	416	1	1	38	5	18	0.0%	454	0.0%
Port Alexander	2C	19	12	50	1,091	3	4	165	14	54	38.8%	1,256	32.3%
Port Protection	2C	12	4	10	207	1	1	38	4	11	63.6%	244	56.8%
Saxman	2C	21	6	17	375	0	0	0	6	17	137.8%	375	137.8%
Sitka	2C	1,138	513	2,546	60,091	131	416	7,165	565	2,962	6.1%	67,256	6.6%
Skagway	2C	56	31	133	3,012	16	62	1,132	40	195	30.5%	4,144	27.6%
Tenakee Springs	2C	38	13	52	1,096	8	34	582	17	87	14.5%	1,678	15.5%
Thorne Bay	2C	104	50	202	4,741	29	87	1,848	54	289	11.5%	6,589	13.9%
Ward Cove	2C	3											
Whale Pass	2C	25	4	19	415	1	3	40	4	21	49.1%	455	38.2%
Wrangell	2C	387	161	986	20,380	70	173	3,545	187	1,159	9.6%	23,925	9.9%
Subtotal, Area 2C	**2C**	**3,677**	**1,561**	**8,113**	**174,674**	**579**	**1,745**	**32,398**	**1,792**	**9,857**	**3.5%**	**207,072**	**3.7%**
Akhiok	3A	10	3	53	1,875	3	40	1,031	3	93	702.3%	2,906	724.7%
Chenega Bay	3A	1											
Chiniak	3A	4	3	15	383	1	0	0	3	15	0.0%	383	0.0%
Cordova	3A	400	177	1,132	20,548	97	414	6,840	206	1,546	9.7%	27,388	9.5%
Kodiak	3A	990	480	3,580	66,249	230	1,115	19,860	551	4,695	6.0%	86,109	6.1%
Larsen Bay	3A	6	5	38	377	3	13	165	6	51	43.2%	542	47.7%
Nanwalek	3A	11	5	21	572	1	3	19	5	24	47.2%	591	41.7%
Old Harbor	3A	7	2	24	300	4	0	0	6	24	0.0%	300	0.0%
Ouzinkie	3A	8	3	38	850	0	0	0	3	38	0.0%	850	0.0%
Port Graham	3A	10	3	6	210	2	60	300	5	66	152.8%	510	120.1%
Port Lions	3A	15	9	59	1,177	2	17	473	11	76	0.0%	1,649	0.0%
Seldovia	3A	125	41	423	7,007	34	291	4,606	62	714	18.8%	11,613	24.1%
Tatitlek	3A	8	2	14	488	3	37	900	5	51	0.0%	1,388	0.0%
Yakutat	3A	43	24	172	3,805	3	55	818	26	226	38.4%	4,623	29.4%
Subtotal, Area 3A	**3A**	**1,638**	**758**	**5,577**	**103,930**	**384**	**2,050**	**35,085**	**892**	**7,627**	**4.9%**	**139,015**	**5.3%**
Chignik	3B	1											
Chignik Lagoon	3B	1											
Cold Bay	3B	9	3	13	169	2	0	0	3	13	0.0%	169	0.0%
False Pass	3B	1											
King Cove	3B	6	1	6	90	1	3	30	2	9	0.0%	120	0.0%

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Appendix Table D-1.–Page 4 of 4.

Tribal name	Regulatory area	Number of SHARCs issued	Set hook gear: Estimated number respondents fished	Set hook gear: Estimated number halibut harvested	Set hook gear: Estimated pounds halibut harvested	Hook & line or handline: Estimated number respondents fished	Hook & line or handline: Estimated number halibut harvested	Hook & line or handline: Estimated pounds halibut harvested	All gear: Estimated number respondents fished	All gear: Estimated number halibut harvested	All gear: Confidence interval for number of halibut	All gear: Estimated pounds halibut harvested	All gear: Confidence interval for pounds of halibut
Sand Point	3B	7	3	56	900	2	3	90	3	59	97.4%	990	87.1%
Subtotal, Area 3B	**3B**	**25**	**8**	**80**	**1,298**	**6**	**8**	**188**	**9**	**88**	**53.6%**	**1,485**	**47.7%**
Akutan	4A	2											
Nikolski	4A	1											
Unalaska	4A	90	23	159	2,582	14	130	2,717	31	289	43.5%	5,299	50.7%
Subtotal, Area 4A	**4A**	**93**	**23**	**159**	**2,582**	**14**	**130**	**2,717**	**31**	**289**	**43.5%**	**5,299**	**50.7%**
Adak	4B	4											
Subtotal, Area 4B	**4B**	**4**	**3**	**11**	**263**	**1**	**0**	**0**	**3**	**11**	**0.0%**	**263**	**0.0%**
St. George Island	4C	1											
St. Paul Island	4C	7	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Subtotal, Area 4C	**4C**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0.0%**	**0**	**0.0%**
Gambell	4D	2											
Savoonga	4D	12	7	77	1,877	7	35	1,089	7	112	342.2%	2,966	409.2%
Subtotal, Area 4D	**4D**	**14**	**7**	**77**	**1,877**	**7**	**35**	**1,089**	**7**	**112**	**342.2%**	**2,966**	**409.2%**
Aleknagik	4E	4	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Bethel	4E	1											
Dillingham	4E	20	8	6	90	7	10	45	10	15	62.3%	135	34.8%
Hooper Bay	4E	1											
King Salmon	4E	7	2	0	0	0	0	0	2	0	0.0%	0	0.0%
Koyuk	4E	1											
Naknek	4E	9	4	13	444	4	7	174	4	20	62.5%	618	79.7%
Nightmute	4E	9	0	0	0	9	92	821	9	92	0.0%	821	0.0%
Nome	4E	11	3	20	427	0	0	0	3	20	0.0%	427	0.0%
Port Heiden	4E	2											
Togiak	4E	1											
Unalakleet	4E	1											
Subtotal, Area 4E	**4E**	**67**	**18**	**39**	**961**	**20**	**109**	**1,041**	**29**	**148**	**9.1%**	**2,001**	**19.4%**
Rural subtotal		**5,526**	**2,378**	**14,056**	**285,583**	**1,011**	**4,076**	**72,518**	**2,762**	**18,132**	**2.9%**	**358,101**	**3.1%**
	2C	**5,039**	**1,975**	**11,083**	**243,608**	**733**	**2,441**	**45,772**	**2,272**	**13,524**	**3.8%**	**289,380**	**4.9%**
	3A	**2,183**	**911**	**7,144**	**130,653**	**491**	**2,646**	**44,717**	**1,100**	**9,789**	**4.5%**	**175,370**	**4.8%**
	3B	**420**	**93**	**595**	**8,776**	**85**	**288**	**6,447**	**160**	**883**	**26.0%**	**15,223**	**31.5%**
	4A	**162**	**32**	**208**	**5,589**	**29**	**234**	**6,007**	**53**	**441**	**51.4%**	**11,596**	**69.4%**
	4B	**6**	**3**	**11**	**263**	**1**	**0**	**0**	**3**	**11**	**0.0%**	**263**	**0.0%**
	4C	**32**	**2**	**119**	**3,450**	**11**	**15**	**300**	**13**	**134**	**0.0%**	**3,750**	**0.0%**
	4D	**16**	**7**	**77**	**1,877**	**7**	**35**	**1,089**	**7**	**112**	**342.2%**	**2,966**	**409.2%**
	4E	**277**	**34**	**110**	**2,022**	**155**	**2,236**	**30,187**	**169**	**2,346**	**15.1%**	**32,209**	**35.6%**
Grand total	**All**	**8,135**	**3,057**	**19,346**	**396,238**	**1,513**	**7,895**	**134,520**	**3,777**	**27,241**	**3.1%**	**530,757**	**4.2%**

Note To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issues are not reported in this table. Subtotals inlcude all tribes and communities.

Appendix Table D-2.– Estimated subsistence harvests of halibut in Alaska by place of residence, 2020.

			Subsistence fished	Subsistence harvest		Sport fished	Sport Harvest	
City of residence	State	Number of SHARCs issued	Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number halibut	Estimated pounds halibut
Adak	AK	6	4	19	393	1	3	75
Akhiok	AK	16	10	104	3,071	0	0	0
Akutan	AK	50	16	157	6,458	1	4	113
Aleknagik	AK	7	4	0	0	0	0	0
Anchor Point	AK	7	4	53	1,027	1	8	139
Anchorage	AK	101	29	270	4,801	19	96	1,570
Angoon	AK	60	20	251	5,023	6	10	214
Auke Bay	AK	2						
Barrow	AK	2						
Bethel	AK	1						
Big Lake	AK	1						
Cantwell	AK	1						
Chenega Bay	AK	4						
Chignik	AK	3						
Chignik Lagoon	AK	5						
Chignik Lake	AK	1						
Chiniak	AK	17	10	51	1,221	6	15	416
Chugiak	AK	2						
Clarks Point	AK	3						
Coffman Cove	AK	35	12	48	1,141	16	60	1,010
Cold Bay	AK	10	5	25	544	0	0	0
Cordova	AK	444	226	1,689	30,496	107	224	4,728
Craig	AK	354	153	830	19,089	102	359	5,378
Delta Junction	AK	2						
Dillingham	AK	30	12	15	128	4	3	70
Douglas	AK	19	4	28	609	4	10	129

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Appendix Table D-2.–Page 2 of 5.

City of residence	State	Number of SHARCs issued	Subsistence fished: Estimated number respondents	Subsistence harvest: Estimated number halibut	Subsistence harvest: Estimated pounds halibut	Sport fished: Estimated number respondents	Sport Harvest: Estimated number halibut	Sport Harvest: Estimated pounds halibut
Dutch Harbor	AK	55	21	172	2,962	15	76	1,296
Eagle River	AK	7	2	14	217	2	4	68
Edna Bay	AK	11	10	32	1,365	3	2	32
Eek	AK	1						
Elfin Cove	AK	7	3	5	113	0	0	0
Emmonak	AK	1						
Excursion Inlet	AK	2						
Fairbanks	AK	3						
False Pass	AK	10	10	30	1,050	0	0	0
Gambell	AK	1						
Gustavus	AK	56	26	215	4,572	21	122	3,294
Haines	AK	413	241	1,077	19,629	60	103	1,833
Homer	AK	16	4	36	601	3	17	223
Hoonah	AK	150	53	524	10,394	27	171	3,074
Hooper Bay	AK	7	7	6	180	0	0	0
Hydaburg	AK	29	10	44	1,760	1	2	47
Hyder	AK	9	4	24	795	3	0	0
Juneau	AK	244	79	543	12,384	63	250	3,994
Kake	AK	83	33	195	6,951	9	10	277
Karluk	AK	7	5	14	254	0	0	0
Kasaan	AK	6	4	3	195	3	0	0
Kasigluk	AK	1						
Kasilof	AK	5						
Kenai	AK	58	7	65	1,011	8	45	727
Ketchikan	AK	402	121	1,069	20,280	111	492	7,949
King Cove	AK	34	24	169	2,850	2	3	37

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Appendix Table D-2.–Page 3 of 5.

City of residence	State	Number of SHARCs issued	Subsistence fished: Estimated number respondents	Subsistence harvest: Estimated number halibut	Subsistence harvest: Estimated pounds halibut	Sport fished: Estimated number respondents	Sport Harvest: Estimated number halibut	Sport Harvest: Estimated pounds halibut
King Salmon	AK	8	3	3	86	1	0	0
Klawock	AK	159	77	461	10,595	39	129	2,102
Klukwan	AK	1						
Kodiak	AK	1,072	577	5,044	89,827	372	1,697	33,390
Larsen Bay	AK	29	14	139	2,109	11	41	848
Manokotak	AK	1						
Metlakatla	AK	97	44	249	5,129	28	37	738
Meyers Chuck	AK	8	3	19	465	1	2	94
Naknek	AK	10	4	20	582	0	1	17
Nanwalek	AK	43	18	217	4,800	4	12	165
Naukati Bay	AK	10	3	14	364	3	21	330
Nightmute	AK	27	27	520	7,669	0	0	0
Nikiski	AK	8	1	11	157	2	5	86
Ninilchik	AK	16	4	22	436	7	32	804
Nome	AK	13	4	22	464	0	0	0
North Pole	AK	1						
Nunapitchuk	AK	1						
Old Harbor	AK	17	10	52	881	4	13	111
Ouzinkie	AK	7	6	66	1,360	1	0	0
Palmer	AK	9	3	25	199	0	0	0
Pelican	AK	29	20	103	4,799	7	12	287
Perryville	AK	7	6	47	688	0	0	0
Petersburg	AK	776	355	2,204	40,852	192	677	10,916
Point Baker	AK	14	9	38	826	4	9	124
Port Alexander	AK	17	13	51	1,166	5	5	95
Port Graham	AK	35	22	363	2,952	0	1	14

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Appendix Table D-2.–Page 4 of 5.

City of residence	State	Number of SHARCs issued	Subsistence fished: Estimated number respondents	Subsistence harvest: Estimated number halibut	Subsistence harvest: Estimated pounds halibut	Sport fished: Estimated number respondents	Sport Harvest: Estimated number halibut	Sport Harvest: Estimated pounds halibut
Port Heiden	AK	2	0	0	0	0	0	0
Port Lions	AK	27	16	106	2,167	13	45	930
Port Protection	AK	1						
Saint Paul Island	AK	30	12	115	3,300	0	0	0
Sand Point	AK	321	108	566	9,293	22	59	1,055
Savoonga	AK	12	7	112	2,966	0	0	0
Saxman	AK	8	2	8	116	1	1	25
Seldovia	AK	138	67	805	13,827	36	252	4,238
Seward	AK	2						
Sitka	AK	1,272	611	3,159	72,671	280	818	15,374
Skagway	AK	56	38	187	4,031	9	24	287
Soldotna	AK	30	8	63	1,213	7	36	676
South Naknek	AK	1						
Sterling	AK	10	2	23	195	1	10	144
Sutton	AK	1						
Tatitlek	AK	12	4	37	953	0	0	0
Tenakee Springs	AK	36	16	79	1,501	14	55	795
Thorne Bay	AK	107	54	279	6,362	41	121	1,718
Tok	AK	1						
Toksook Bay	AK	38	20	241	1,760	0	0	0
Tununak	AK	98	82	1,509	21,094	0	0	0
Unalakleet	AK	2						
Unalaska	AK	55	16	119	2,368	11	52	994
Valdez	AK	19	12	100	1,763	0	0	0
Ward Cove	AK	25	5	47	829	7	22	362
Wasilla	AK	16	4	20	417	2	6	113
Whale Pass	AK	4						

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Appendix Table D-2.–Page 5 of 5.

City of residence	State	Number of SHARCs issued	Subsistence fished: Estimated number respondents	Subsistence harvest: Estimated number halibut	Subsistence harvest: Estimated pounds halibut	Sport fished: Estimated number respondents	Sport Harvest: Estimated number halibut	Sport Harvest: Estimated pounds halibut
Wrangell	AK	462	227	1,584	32,412	114	396	8,362
Yakutat	AK	70	40	368	8,533	13	51	902
Subtotal, AK	AK	8,072	3,760	27,123	528,934	1,861	6,761	123,234
Alaska Subtotal		**8,072**	**3,760**	**27,123**	**528,934**	**1,861**	**6,761**	**123,234**
Non-Alaska subtotal		**63**	**17**	**117**	**1,823**	**15**	77	**856**
Grand total		**8,135**	**3,777**	**27,241**	**530,757**	**1,876**	**6,838**	**124,090**

Note To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issues are not reported in this table. Subtotals inlcude all tribes and communities.

Appendix Table D-3.– Estimated subsistence harvests of halibut in Alaska by gear type and place of residence, 2020.

			Estimated harvest by gear type								
			Set hook gear			Hook and line or handline			All gear		
City of residence	State	Number of SHARCs issued	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested
Adak	AK	6	4	17	369	2	2	24	4	19	393
Akhiok	AK	16	7	61	1,985	5	43	1,086	10	104	3,071
Akutan	AK	50	10	54	3,146	10	104	3,311	16	157	6,458
Aleknagik	AK	7	4	0	0	0	0	0	4	0	0
Anchor Point	AK	7	4	46	870	1	7	158	4	53	1,027
Anchorage	AK	101	21	194	3,812	11	76	989	29	270	4,801
Angoon	AK	60	12	153	2,801	8	99	2,222	20	251	5,023
Auke Bay	AK	2									
Barrow	AK	2									
Bethel	AK	1									
Big Lake	AK	1									
Cantwell	AK	1									
Chenega Bay	AK	4									
Chignik	AK	3									
Chignik Lagoon	AK	5									
Chignik Lake	AK	1									
Chiniak	AK	17									
Chugiak	AK	2									
Clarks Point	AK	3									
Coffman Cove	AK	35	8	30	933	8	18	207	12	48	1,141
Cold Bay	AK	10	2	2	56	4	23	488	5	25	544
Cordova	AK	444	192	1,241	22,672	112	448	7,824	226	1,689	30,496
Craig	AK	354	141	687	16,221	50	143	2,867	153	830	19,089
Delta Junction	AK	2									
Dillingham	AK	30	11	9	128	9	7	0	12	15	128
Douglas	AK	19	4	24	554	2	5	55	4	28	609
Dutch Harbor	AK	55	16	107	1,757	9	65	1,205	21	172	2,962
Eagle River	AK	7	1	13	127	1	1	90	2	14	217
Edna Bay	AK	11	10	30	1,253	1	2	113	10	32	1,365
Eek	AK	1									
Elfin Cove	AK	7	3	5	113	2	0	0	3	5	113

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Appendix Table D-3–Page 2 of 4.

			Estimated harvest by gear type								
			Set hook gear			Hook and line or handline			All gear		
City of residence	State	Number of SHARCs issued	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested
Emmonak	AK	1									
Excursion Inlet	AK	2									
Fairbanks	AK	3									
False Pass	AK	10	0	0	0	10	30	1,050	10	30	1,050
Gambell	AK	1									
Gustavus	AK	56	20	177	3,864	9	39	708	26	215	4,572
Haines	AK	413	223	1,027	18,795	50	49	834	241	1,077	19,629
Homer	AK	16	4	30	518	2	6	83	4	36	601
Hoonah	AK	150	47	457	8,855	17	67	1,539	53	524	10,394
Hooper Bay	AK	7	1	0	0	6	6	180	7	6	180
Hydaburg	AK	29	10	43	1,750	0	1	10	10	44	1,760
Hyder	AK	9	3	23	776	3	1	19	4	24	795
Juneau	AK	244	71	462	10,975	19	81	1,409	79	543	12,384
Kake	AK	83	30	185	6,743	8	10	209	33	195	6,951
Karluk	AK	7	2	0	0	2	14	254	5	14	254
Kasaan	AK	6	2	2	105	4	1	90	4	3	195
Kasigluk	AK	1									
Kasilof	AK	5									
Kenai	AK	58	3	27	435	6	38	577	7	65	1,011
Ketchikan	AK	402	104	746	14,634	55	323	5,646	121	1,069	20,280
King Cove	AK	34	15	105	1,481	12	63	1,369	24	169	2,850
King Salmon	AK	8	3	0	0	1	3	86	3	3	86
Klawock	AK	159	66	400	9,634	26	61	960	77	461	10,595
Klukwan	AK	1									
Kodiak	AK	1,072	502	3,910	69,481	241	1,133	20,346	577	5,044	89,827
Larsen Bay	AK	29	6	45	587	10	94	1,523	14	139	2,109
Manokotak	AK	1									
Metlakatla	AK	97	42	173	4,398	12	75	731	44	249	5,129
Meyers Chuck	AK	8	3	19	465	0	0	0	3	19	465
Naknek	AK	10	4	15	486	4	4	96	4	20	582
Nanwalek	AK	43	15	159	4,335	9	58	465	18	217	4,800

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Appendix Table D-3–Page 3 of 4.

			Estimated harvest by gear type								
			Set hook gear			Hook and line or handline			All gear		
City of residence	State	Number of SHARCs issued	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested
Naukati Bay	AK	10	3	14	364	0	0	0	3	14	364
Nightmute	AK	27	0	0	0	27	520	7,669	27	520	7,669
Nikiski	AK	8	0	0	0	1	11	157	1	11	157
Ninilchik	AK	16	2	16	362	1	6	74	4	22	436
Nome	AK	13	4	22	464	0	0	0	4	22	464
North Pole	AK	1									
Nunapitchuk	AK	1									
Old Harbor	AK	17	5	39	609	7	13	273	10	52	881
Ouzinkie	AK	7	6	62	1,255	3	4	105	6	66	1,360
Palmer	AK	9	2	5	49	1	20	150	3	25	199
Pelican	AK	29	20	97	4,611	6	7	188	20	103	4,799
Perryville	AK	7	5	40	590	4	7	98	6	47	688
Petersburg	AK	776	279	1,637	29,675	158	567	11,177	355	2,204	40,852
Point Baker	AK	14	9	37	789	1	1	38	9	38	826
Port Alexander	AK	17	11	47	1,001	3	4	165	13	51	1,166
Port Graham	AK	35	18	244	1,856	9	119	1,096	22	363	2,952
Port Heiden	AK	2									
Port Lions	AK	27	12	88	1,679	4	18	488	16	106	2,167
Port Protection	AK	1									
Saint Paul Island	AK	30	1	100	3,000	11	15	300	12	115	3,300
Sand Point	AK	321	63	406	5,954	51	160	3,340	108	566	9,293
Savoonga	AK	12	7	77	1,877	7	35	1,089	7	112	2,966
Saxman	AK	8	2	6	78	1	2	38	2	8	116
Seldovia	AK	138	47	493	8,753	38	312	5,074	67	805	13,827
Seward	AK	2									
Sitka	AK	1,272	551	2,732	65,127	142	427	7,543	611	3,159	72,671
Skagway	AK	56	29	125	2,899	15	62	1,132	38	187	4,031
Soldotna	AK	30	3	22	540	7	41	673	8	63	1,213
South Naknek	AK	1									
Sterling	AK	10	0	2	32	1	21	163	2	23	195
Sutton	AK	1									

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Appendix Table D-3–Page 3 of 4.

			Estimated harvest by gear type								
			Set hook gear			Hook and line or handline			All gear		
City of residence	State	Number of SHARCs issued	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested	Estimated number respondents fished	Estimated number fish harvested	Estimated pounds fish harvested
Tatitlek	AK	12	2	6	128	2	31	825	4	37	953
Tenakee Springs	AK	36	12	45	919	8	34	582	16	79	1,501
Thorne Bay	AK	107	49	191	4,526	28	87	1,836	54	279	6,362
Tok	AK	1									
Toksook Bay	AK	38	0	0	0	20	241	1,760	20	241	1,760
Tununak	AK	98	7	66	986	82	1,443	20,108	82	1,509	21,094
Unalakleet	AK	2									
Unalaska	AK	55	7	51	810	12	67	1,559	16	119	2,368
Valdez	AK	19	9	75	1,357	4	25	406	12	100	1,763
Ward Cove	AK	25	4	30	534	3	17	295	5	47	829
Wasilla	AK	16	3	15	332	1	4	85	4	20	417
Whale Pass	AK	4									
Wrangell	AK	462	190	1,381	28,042	83	203	4,370	227	1,584	32,412
Yakutat	AK	70	37	300	7,334	6	68	1,199	40	368	8,533
Alaska subtotal		**8,072**	**3,045**	**19,266**	**394,901**	**1,502**	**7,858**	**134,033**	**3,760**	**27,123**	**528,934**
Non-Alaska subtotal		**63**	**12**	**80**	**1,336**	**11**	**37**	**486**	**17**	**117**	**1,823**
Grand total		**8,135**	**3,057**	**19,346**	**396,238**	**1,513**	**7,895**	**134,520**	**3,777**	**27,241**	**530,757**

Note To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issues are not reported in this table. Subtotals inlcude all tribes and communities.

Appendix Table D-4.– Estimated number of respondents that subsistence or sport fished in Alaska, by place of residence, 2020.

City of residence	State	Number of SHARCs issued[a]	Estimated number subsistence or sport fished
Adak	AK	6	4
Akhiok	AK	16	10
Akutan	AK	50	17
Aleknagik	AK	7	4
Anchor Point	AK	7	5
Anchorage	AK	101	38
Angoon	AK	60	20
Auke Bay	AK	2	
Barrow	AK	2	
Bethel	AK	1	
Big Lake	AK	1	
Cantwell	AK	1	
Chenega Bay	AK	4	
Chignik	AK	3	
Chignik Lagoon	AK	5	
Chignik Lake	AK	1	
Chiniak	AK	17	13
Chugiak	AK	2	
Clarks Point	AK	3	
Coffman Cove	AK	35	23
Cold Bay	AK	10	5
Cordova	AK	444	259
Craig	AK	354	208
Delta Junction	AK	2	
Dillingham	AK	30	12
Douglas	AK	19	7
Dutch Harbor	AK	55	29
Eagle River	AK	7	3
Edna Bay	AK	11	10
Eek	AK	1	
Elfin Cove	AK	7	3
Emmonak	AK	1	
Excursion Inlet	AK	2	
Fairbanks	AK	3	
False Pass	AK	10	10
Gambell	AK	1	
Gustavus	AK	56	36
Haines	AK	413	261
Homer	AK	16	6
Hoonah	AK	150	71
Hooper Bay	AK	7	7
Hydaburg	AK	29	10
Hyder	AK	9	6

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City of residence	State	Number of SHARCs issued[a]	Estimated number subsistence or sport fished
Juneau	AK	244	114
Kake	AK	83	36
Karluk	AK	7	5
Kasaan	AK	6	4
Kasigluk	AK	1	
Kasilof	AK	5	
Kenai	AK	58	12
Ketchikan	AK	402	189
King Cove	AK	34	24
King Salmon	AK	8	4
Klawock	AK	159	93
Klukwan	AK	1	
Kodiak	AK	1,072	734
Larsen Bay	AK	29	21
Manokotak	AK	1	0
Metlakatla	AK	97	64
Meyers Chuck	AK	8	4
Naknek	AK	10	4
Nanwalek	AK	43	18
Naukati Bay	AK	10	6
Nightmute	AK	27	27
Nikiski	AK	8	3
Ninilchik	AK	16	10
Nome	AK	13	4
North Pole	AK	1	
Nunapitchuk	AK	1	
Old Harbor	AK	17	10
Ouzinkie	AK	7	6
Palmer	AK	9	3
Pelican	AK	29	22
Perryville	AK	7	6
Petersburg	AK	776	452
Point Baker	AK	14	10
Port Alexander	AK	17	13
Port Graham	AK	35	22
Port Heiden	AK	2	
Port Lions	AK	27	19
Port Protection	AK	1	0
Saint Paul Island	AK	20	6
Sand Point	AK	321	123
Savoonga	AK	12	7
Saxman	AK	8	2
Seldovia	AK	138	84
Seward	AK	2	

-continued-

City of residence	State	Number of SHARCs issued[a]	Estimated number subsistence or sport fished
Sitka	AK	1,272	755
Skagway	AK	56	41
Soldotna	AK	30	12
South Naknek	AK	1	
St Paul Island	AK	10	6
Sterling	AK	10	2
Sutton	AK	1	
Tatitlek	AK	12	4
Tenakee Springs	AK	36	24
Thorne Bay	AK	107	73
Tok	AK	1	
Toksook Bay	AK	38	20
Tununak	AK	98	82
Unalakleet	AK	2	
Unalaska	AK	55	23
Valdez	AK	19	12
Ward Cove	AK	25	10
Wasilla	AK	16	5
Whale Pass	AK	4	
Wrangell	AK	462	282
Yakutat	AK	70	47
Alaska subtotal		**8,072**	**4,658**
Non-Alaska subtotal		**63**	**25**
Grand total		**8,135**	**4,683**

Note To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issues are not reported in this table. Subtotals inlcude all tribes and communities.

a. Included SHARCs issued and known fishers identified in Tununak and Nightmute.

APPENDIX E–SUMMARY

To be added to final document