

**Technical Paper No. 414**

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# **Subsistence Harvests of Pacific Halibut in Alaska, 2014**

by

**James A. Fall**

and

**Terri Lemons**

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January 2016

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Alaska Department of Fish and Game

Division of Subsistence



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Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	Alaska Administrative Code	AAC	fork length	FL
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	mid-eye-to-fork	MEF
gram	g			mid-eye-to-tail-fork	METF
hectare	ha			standard length	SL
kilogram	kg	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	total length	TL
kilometer	km			Mathematics, statistics	
liter	L	at	@	all standard mathematical signs, symbols and abbreviations	
meter	m	compass directions:		alternate hypothesis	H <sub>A</sub>
milliliter	mL	east	E	base of natural logarithm	e
millimeter	mm	north	N	catch per unit effort	CPUE
		south	S	coefficient of variation	CV
Weights and measures (English)		west	W	common test statistics	(F, t, $\chi^2$ , etc.)
cubic feet per second	ft <sup>3</sup> /s	copyright	©	confidence interval	CI
foot	ft	corporate suffixes:		correlation coefficient (multiple)	R
gallon	gal	Company	Co.	correlation coefficient (simple)	r
inch	in	Corporation	Corp.	covariance	cov
mile	mi	Incorporated	Inc.	degree (angular)	°
nautical mile	nmi	Limited	Ltd.	degrees of freedom	df
ounce	oz	District of Columbia	D.C.	expected value	E
pound	lb	et alii (and others)	et al.	greater than	>
quart	qt	et cetera (and so forth)	etc.	greater than or equal to	?
yard	yd	exempli gratia (for example)	e.g.	harvest per unit effort	HPUE
		Federal Information Code	FIC	less than	<
Time and temperature		id est (that is)	i.e.	less than or equal to	?
day	d	latitude or longitude	lat. or long.	logarithm (natural)	ln
degrees Celsius	°C	monetary symbols (U.S.)	\$, ¢	logarithm (base 10)	log
degrees Fahrenheit	°F	months (tables and figures): first three letters	Jan, ..., Dec	logarithm (specify base)	log <sub>2</sub> , etc.
degrees kelvin	K	registered trademark	®	minute (angular)	'
hour	h	trademark	™	not significant	NS
minute	min	United States (adjective)	U.S.	null hypothesis	H <sub>0</sub>
second	s	United States of America (noun)	USA	percent	%
		U.S.C.	United States Code	probability	P
Physics and chemistry		U.S. state	use two-letter abbreviations (e.g., AK, WA)	probability of a type I error (rejection of the null hypothesis when true)	$\alpha$
all atomic symbols				probability of a type II error (acceptance of the null hypothesis when false)	$\beta$
alternating current	AC			second (angular)	"
ampere	A			standard deviation	SD
calorie	cal			standard error	SE
direct current	DC			variance	
hertz	Hz			population	Var
horsepower	hp			sample	var
hydrogen ion activity (negative log of)	pH				
parts per million	ppm				
parts per thousand	ppt, ‰				
volts	V				
watts	W				

***TECHNICAL PAPER NO. 414***

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by

James A. Fall,  
Alaska Department of Fish and Game, Division of Subsistence, Anchorage

and

Terri Lemons  
Alaska Department of Fish and Game, Division of Subsistence, Anchorage

Alaska Department of Fish and Game  
Division of Subsistence  
333 Raspberry Road  
Anchorage, AK 99518

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*James A. Fall and Terri Lemons,  
Alaska Department of Fish and Game, Division of Subsistence,  
333 Raspberry Road, Anchorage, Alaska, 99518, USA*

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## ABSTRACT

This report describes the results of a project to estimate the subsistence harvest of Pacific halibut *Hippoglossus stenolepis* in Alaska in 2014. The National Marine Fisheries Service adopted rules governing subsistence halibut fishing in 2003. Data were collected through a voluntary survey mailed to all holders of Subsistence Halibut Registration Certificates (SHARCs), supplemented by interviews in six communities. The survey response rate was 65% (6,336 surveyed of 9,719 potential halibut fishers). An estimated 4,506 individuals participated in the subsistence fishery for halibut in 2014, up from 4,394 in 2012. The estimated harvest in 2014 was 40,698 halibut, comprising 760,469 lb (net weight;  $\pm 3.5\%$ ). This compares to a high of 55,875 fish and 1,178,222 lb ( $\pm 3.0\%$ ) in 2005 and a low of 37,093 fish and 686,991 lb ( $\pm 2.9\%$ ) in 2012. Of the total subsistence halibut harvested in 2014, 71% were harvested with setline gear and 29% with hand-operated gear. As in 2003–2012, the largest portion of the Alaska subsistence halibut harvest in 2014 occurred in Regulatory Area 2C (Southeast Alaska), 56%, followed by Area 3A (Southcentral Alaska), 32%. Subsistence harvests represented about 2.3% of the total halibut removals in Alaska in 2014. The harvest estimates based on the surveys for 2003–2012 and 2014 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, a survey to estimate subsistence halibut harvests in Alaska in 2013 did not take place and a survey will not occur for 2015. The report recommends that monitoring of the subsistence harvest of halibut in Alaska be resumed in the future.

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 2014 through a survey mailed to registered subsistence halibut fishers; the survey was supplemented by interviews in selected communities. This was the 11<sup>th</sup> year for which this research was conducted. (See [Fall et al. 2004] for the results for 2003, [Fall, George, and Easley 2005] for the results for 2004, [Fall, Koster, and Davis 2006] for the results for 2005, [Fall, Koster, and Turek 2007] for the results for 2006, [Fall and Koster 2008] for the results for 2007, [Fall and Koster 2010] for the results for 2008, [Fall and Koster 2011] for the results for 2009, [Fall and Koster 2012] for the results for 2010, [Fall and Koster 2013] for the results for 2011, and [Fall and Koster 2014] for results for 2012.) Due to lack of funds, a harvest estimate was not developed for 2013. The Division of Subsistence administered the project through a grant from the National Oceanic and Atmospheric Administration (NOAA) (award number NA14NMF4370115).

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, IPHC, and the National Marine Fisheries Service (NMFS), August 11, 2000 (National Marine Fisheries Service 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 <http://www.fakr.noaa.gov/frules/fr18145.pdf>). 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.<sup>1</sup> (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 SHARC from the Restricted Access Management (RAM) Program office of NMFS prior to fishing.<sup>2</sup> Federal regulations (50 CFR Part 300.65(h)(4)) also authorize periodic surveys of SHARC holders in order to estimate annual subsistence harvests and related catch and effort information. The regulation states that, "Responding to a subsistence halibut harvest survey will be voluntary."

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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 of 2009. 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 (see <http://www.fakr.noaa.gov/frules/70fr16742.pdf>, page 16,747).
  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.

Table 1 provides population estimates for the eligible rural communities for 2000 and 2010 based on the federal decennial censuses. The total population of these communities in 2000 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%) (U.S. Census Bureau 2011). In addition, the nonrural communities of Juneau and Ketchikan (excluding Saxman, whose residents are eligible) in 2010 had Alaska Native populations of 6,005 and 2,625, respectively (Alaska Department of Labor and Workforce Development 2015), 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. Table 1 shows that Alaska Department of Labor and Workforce Development estimates for eligible communities and areas for 2014 total 86,952.

## **PROJECT OBJECTIVES**

The primary goal of the project was to estimate the subsistence harvest of halibut in Alaska in the calendar year 2014. Funding for 2014 totaled \$129,000, the same as study year 2012. In addition to 3 rounds of survey mailings, outreach and supplemental interviewing occurred in 2 communities in Area 2C (Hydaburg and Sitka), 2 communities in Area 3B (King Cove and Sand Point), and 2 communities in Area 4E (Toksook Bay and Tununak). The project objectives for 2014 were:

1. Produce an estimate of the subsistence harvest of halibut in Alaska in 2014 by community, tribe, gear type, and IPHC regulatory area, along with an estimate of the number of individuals who subsistence fished for halibut in 2014.
2. Produce an estimate of the harvest of halibut by SHARC holders while sport fishing in 2014.

An objective from previous study years to estimate lingcod and rockfish harvests by subsistence halibut fishers was dropped for 2014.

## **DATA COLLECTION METHODS**

### **Public Outreach**

Information about the project was available on the NMFS website for subsistence halibut fishing in Alaska (see <http://www.fakr.noaa.gov/ram/subsistence/halibut.htm>).

For additional outreach, division staff traveled to 2 Southeast Alaska (Area 2C) communities (Hydaburg and Sitka), 2 Alaska Peninsula (Area 3B) communities (King Cove and Sand Point), and 2 western Alaska (Area 4E) communities (Toksook Bay and Tununak). Meetings took place with tribal officials about the importance of the survey as well as the SHARC program. In addition, staff provided information about the SHARC program during household surveys.

### **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, 9,474 individual SHARCs and 8 community or ceremonial permits were issued for 2014 (see section “Sample Achievement” below). All individuals who held a SHARC for any portion of 2014 were mailed a retrospective recall survey covering a 12-month harvest period: calendar year 2014. Data from 3 community permits were returned directly to the RAM Program, and are included in these study findings. Five community permits were not returned, and were not included in further analysis.

The 2014 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 2014 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 2014; and number of hooks usually set. Questions about harvests of lingcod and rockfish taken while subsistence fishing for halibut, asked for 2003–2012, were excluded from the 2014 form. 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 for 2004–2012 and 2014. Another survey question was added in 2004 to record the location of sport halibut fishing by SHARC holders. 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). 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 2010–2012 and 2014.

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.

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 9,474 SHARC holders occurred on January 9, 2015. The second mailing to 4,532 SHARC holders occurred on March 10, 2015, and a third mailing to 3,330 SHARC holders occurred on April 17, 2015.

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 local research assistants hired through subcontracts with Alaska Native tribes or by division staff. Because of the large number of eligible communities and tribes, it was not possible to conduct surveys in most communities.

### ***Sitka and Hydaburg***

In Southeast Alaska (Area 2C), surveys were administered Sitka and Hydaburg with SHARC holders who had not returned the mailed form. Cooperative agreements with the Sitka Tribe of Alaska and the Hydaburg Cooperative Association supported this interviewing. In each community, the surveys were administered face-to-face or by telephone. Most of the surveys took place in Hydaburg during April and May and in Sitka during May and June.

### ***Sand Point and King Cove***

Division of Subsistence Resource Specialist II, Lisa Hutchinson-Scarborough sent letters to the Tribal Councils of King Cove (Agdaagux Tribe of King Cove, Native Village of Belkofski), and Sand Point (Qagan Tayagungin Tribe of Sand Point Village, Pauloff Harbor Village, and Native Village of Unga) in early March 2015 to inform them of the division's plans to conduct a subsistence halibut harvest survey in their communities in April and May 2015. The letters provided an overview of the subsistence halibut program, including registration eligibility, requirements to participate in the fishery, and the goals of the mail-out survey. The letters also described the purpose and methods of the household surveys and requested approval of the research. Verbal or written approvals were granted by tribal council representatives prior to the start of the field research. Upon arrival in both King Cove and Sand Point, Scarborough met with representatives of each tribe as well as with the Mayor of King Cove, the President of the King Cove Corporation, and the ADF&G area management biologist to discuss the project research objectives and methods. Each tribe was provided with SHARC renewal and new registration forms.

From April 28–30, 2015, Scarborough traveled to King Cove and first met with the Agdaagux tribal administrator and assistant about the project and obtained recommendations for local research assistants (LRA's). Two LRA's were hired: Danielle Gould and Shannon Johnson. The LRAs were provided an overview of the SHARC program and the harvest project, and then were trained to administer the household surveys.

The division Information Management unit generated two lists of names of active and inactive SHARC card holders resident in King Cove or from King Cove tribes. The first list included current SHARC holders that did not return their household survey through the mail. The second list included former SHARC holders from King Cove who had indicated on earlier surveys that they fished at least once. Each LRA was provided with copies of the new applicant and SHARC renewal application forms and was asked to assist people to get re-enrolled if their SHARC card had expired, as well as anyone interested in applying for a new registration. The LRAs divided the two lists of names and as part of the training, Scarborough assisted the two LRAs with several surveys, then left the remainder of the household surveys for them to complete on their own. The LRAs completed their surveys with within a week of the training. They mailed back the survey forms, as well as new and renewal SHARC registrations, to the Division of Subsistence. She then forwarded the registration forms to NMFS for processing, and the survey forms were turned into the Division of Subsistence Information Management staff for data entry and analysis.

Several weeks after the surveys were conducted, the two LRAs met with the Agdaagux Tribal Council and provided the Council with an overview of the project and encouraged the tribe to assist their members with new and re-enrollments in the SHARC program if interested.

From May 5–7, Scarborough traveled to Sand Point. Three LRAs were recommended by the tribes: Alana Kuchenoff, Amanda Adams, and Kathy Adams. They were trained and familiarized with the SHARC program and the project. They were provided with new and renewal enrollment forms. Scarborough also met with the Unga Tribe tribal council.

As for King Cove, two lists of potential interviewees for Sand Point were generated: current SHARC holders who had not responded to the mailed surveys and former SHARC holders who had indicated subsistence halibut fishing in prior study years. The two lists were divided among the three LRAs. They completed their work within a month of the training.

Shortly after the surveys were completed in Sand Point, an LRA met with the Qagan Tayagungin Tribe to provide an overview of the project. She informed them that she was available to help anyone to register for a SHARC.

### ***Tununak and Toksook Bay***

Division of Subsistence staff met by teleconference with the Nunakauyak Traditional Council (TC) (Toksook Bay) in October 2014 and the Tununak Indian Reorganization Act (IRA) Council in January

2015 to discuss the division's plan to conduct subsistence halibut harvest surveys in their communities in early 2015. Each council approved the proposed research, and requested that division staff organize community informational meetings immediately prior to conducting surveys. On April 7, two division researchers (David Runfola and Odin Miller) traveled to Toksook Bay and held a meeting in the TC office building. In attendance were 6 members of the Nunakauyak TC and approximately 10 other residents of the community. On April 10, division staff traveled to Tununak and held a similar informational meeting in the Coastal Villages Region Fund (CVRF) building. In attendance were approximately 30 Tununak residents. During the informational meetings, division staff introduced the NMFS Alaska Subsistence Halibut Program, including the registration and certification requirements for Alaska Native tribal members and rural resident subsistence halibut fishers. Division staff also described the goals of the halibut program, the purpose of completing subsistence halibut harvest surveys, and the methods by which researchers would conduct surveys. During both meetings, division staff answered numerous questions and responded to several comments from meeting attendees.

Following the meeting in Toksook Bay, Nunakauyak TC staff provided for researchers a list of names of tribal members. A similar list was not available from the Tununak Council. Division staff also contacted the Lower Kuskokwim School District (LKSD) site administrators at the Toksook Bay and Tununak schools and obtained from each a list of names of LKSD staff residing in district housing in the communities. Researchers used these lists of names to identify and contact potential subsistence halibut fishers. Division staff contracted 2 local research assistants in Toksook Bay who were recommended by the Nunakauyak TC, and 2 in Tununak recommended by CVRF staff. Local research assistants helped with logistical planning and accompanied division staff during all survey activities.

Two teams comprised of one division researcher and one local research assistant deployed to complete surveys in Toksook Bay April 7–9 and in Tununak April 1–2. Research teams approached every dwelling known to be a residence in each community and attempted to contact all residents who were active subsistence halibut fishers in 2014. Subsistence halibut fishers present in each residence were asked to complete a survey. Upon receiving consent from subsistence halibut fishers active in 2014, research teams completed a survey with each respondent. If a potential respondent was under the age of 18 years, researchers completed a survey only in the presence of that fisher's parent or legal guardian and only with the parent's or guardian's consent. Through discussions with local research assistants and other residents in each household, researchers determined whether there were additional subsistence halibut fishers who were not present at the time of first contact by the research teams. Researchers made up to 3 attempts to survey all subsistence fishers in each household. A fisher was recorded as unavailable to be surveyed after the third failed attempt to contact. Surveys were mailed to the division's information management section for data entry and analysis.

Research teams provided households with applications for Subsistence Halibut Registration Certificates, either the Alaska Native Tribal Member form or Rural Resident form as specified by each person. Research teams gave each interested person the option to complete an application immediately for submission to Division of Subsistence staff or to do so at their convenience and mail the completed application to NMFS.

### *Comprehensive Surveys*

In addition, while engaged in other projects, division staff collected harvest information from SHARC holders who had not returned surveys by mail in the southcentral Alaska communities of Chenega Bay, Cordova, Nanwalek, Port Graham, Seldovia, and Tatitlek.

### **SAMPLE ACHIEVEMENT**

Table 3 reports sample achievement by tribe, rural community, and community of residence. Overall, 6,336 surveys were completed by 9,719 potential participants in the fishery, including SHARC holders, 3 returned special permits, and identified potential halibut fishers who did not hold SHARCs in 4 communities. The response rate was 65% (Figure 2). For residents of the 118 eligible rural communities and eligible rural

areas who did not register as tribal members, 4,489 of 6,259 potential surveys were completed (72%) (tables 3 and 4). As shown in Figure 3, in 2014 there were 11 communities with more than 100 nontribal SHARC holders, accounting in total for 85% of all nontribal SHARCs issued in rural communities. Return rates were 62% or more in all 11 of these communities.

Of the 3,460 tribal members who were listed as potential participants in the fishery in 2014, 1,847 (53%) were surveyed. As shown in Figure 3, there were 16 tribes with more than 70 potential subsistence fishers. Return rates for these 16 tribes varied widely, from 88% in Sand Point (where household surveys were conducted to supplement the return of surveys by mail) to 36% for Angoon (for which no directed outreach occurred). In total, these 16 tribes accounted for 69% of all tribal SHARCs and potential fishers.

Figure 4 illustrates survey response rates by place of residence of SHARC holders for the 21 communities with 100 or more SHARC holders in 2014. These communities accounted for 83% of all potential fishers and 84% of all returned surveys. Response rates were 50% or higher in all but 4 of these communities, and equaled or exceeded 60% in all but 5.

Figure 5 shows the survey return rate by response category (see also Table 3). After the first mailing, 4,578 surveys were returned—a response rate of 47%. Responses to the second mailing added 844 surveys, and the third mailing produced 381 responses, for a total response to the postal survey of 5,803 surveys, or 60% of all potential respondents. In addition, surveys administered by representatives of tribes and ADF&G staff added 533 surveys. This brought the total response to 6,336 surveys, 65% of the sampling goal. The overall response rate for the survey for 2014 decreased from 71% in 2012 and 68% in 2011, but was the fourth-highest of the 11 study years.

The number of surveys returned as “undeliverable” was 984 in 2014 (Table 3). Subtracting “undeliverables” from the mailed survey target of 9,474 gives a response rate by mail of 68% in 2014, compared to 70% in 2012 (the highest for any survey year) and 68% in 2011. Removing “undeliverables” from the total survey goal (9,719) results in a response rate of 73%.

## **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 SQL Server<sup>3</sup> 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 1 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 MS SQL programming. 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.

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

## 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.

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

$$H_t = \sum H_i \quad (1)$$

$$\text{where } H_i = h_i W_i \quad (2)$$

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

$H_t$  = 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, 68 SHARCs were held by eligible tribal members living outside of Alaska. Of these, 38 postal surveys were returned from this group, and only 2 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 2 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 separate strata 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 2014, 858 rural and 445 tribal SHARCs expired and were not renewed; of those, 414 (48%) rural SHARCs and 256 (58%) tribal SHARCs participated in the survey. Of those survey respondents with rural SHARCs that expired, 22% participated in the subsistence fishery, as did 70% of survey respondents with expired tribal SHARCs.

Third, as in 2009–2012, for tribal and rural SHARC holders from Nanwalek, comparisons of reported harvests with estimates from previous years, plus relatively low response rates, suggested that survey responses included all harvesters. Therefore, reported harvests were used as total harvest estimates for both the Nanwalek tribe and for Nanwalek rural SHARC holders.

The RAM Program issued 8 community or ceremonial permits for 2014; 3 were returned with data. Harvests from the 3 returned 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.

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 project 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 project, 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 1.96. 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*%):

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

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

Where

*s* = sample standard deviation

*x* = reported amount harvested by individual SHARC holders

$\bar{x}$  = mean harvest

*n* = total sample size

*N* = total population size

*n<sub>i</sub>* = tribal or community sample size

*t<sub>α/2</sub>* = Student's *t*-statistic for alpha level ( $\alpha=0.95$ ) 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 survey).

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  $0.75 \times \text{round weight} = \text{net weight}$ .<sup>4</sup>

## Products

The public review draft of this final report was completed in December 2015 and circulated for review and comments. The draft report was also posted at the Division of Subsistence website. A presentation of the project findings and recommendations occurred at the December 2015 meeting of the NPFMC in Anchorage, Alaska. 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 as well as the Alaska State Library.

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4. 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)<sup>a</sup>, 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.”

a. 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).

## 2. FINDINGS

### SUBSISTENCE HALIBUT HARVESTS IN 2014

#### Estimated Number of Subsistence Halibut Fishers

Of the 9,719 individuals who were potential subsistence halibut fishers in 2014, an estimated 4,506 (46%) participated in the subsistence halibut fishery (Table 4; Figure 6). Of the 3,460 individuals who were members of an eligible tribe, an estimated 1,359 participated in the fishery (39%). Of the 6,259 individuals who qualified as residents of rural communities, an estimated 3,147 (50%) participated in the subsistence fishery for halibut in 2014. The estimated total of 4,506 subsistence halibut fishers in 2014 is the second-lowest estimate since the SHARC program began in 2003, but a slight increase from the estimate of 4,394 fishers in 2012 (Figure 6).

Alaska Native tribes with the most subsistence halibut fishers in 2014 included the Central Council of Tlingit and Haida Indians (139 subsistence halibut fishers), the Ketchikan Indian Corporation (136), the Native Village of Toksook Bay (113), the Sitka Tribe of Alaska (77), the Native Village of Tununak (70), the Sun'aq Tribe of Kodiak (59), the Hoonah Indian Association (50), the Metlakatla Indian Community (39), the Wrangell Cooperative Association (33), the Qagan Toyagungin Tribe of Sand Point (33), the Hydaburg Cooperative Association (30), the Organized Village of Kake (30), the Angoon Community Association (28), and the Yakutat Tlingit Tribe (28). Of the non-tribal residents of eligible rural communities, the most subsistence fishers lived in Kodiak (691), followed by Sitka (573), Petersburg (341), Haines (225), Wrangell (242), Cordova (176), and Craig (136). Appendix Table D-1 provides details for each tribe and community regarding participation in the subsistence fishery and subsistence halibut harvests in 2014.

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 2014 by community can be obtained. Appendix tables D-2, D-3, and D-4 provide project findings based on place of residence. Communities with 100 or more participants in the subsistence halibut fishery in 2014 were Kodiak (763), Sitka (644), Petersburg (375), Wrangell (277), Haines (235), Craig (200), Cordova (197), Ketchikan (171), and Toksook Bay (113). Of the 9 Alaska communities with 100 or more subsistence halibut fishers in 2014, 6 had about the same or slightly fewer fishers than in 2012 (+1% to +8%) (Figure 7). The estimated number of subsistence halibut fishers in Ketchikan and Wrangell increased by 8% and 11%, respectively. Because data collection was not limited to current SHARC holders in Toksook Bay, the estimated number of participants in the fishery increased substantially compared to 2008 through 2012 (Figure 7). (See Chapter 3 for further discussion of Toksook Bay). Two non-Alaska-resident tribal SHARC holders subsistence fished for halibut in Alaska in 2014, compared to a high of 24 in 2005 and low of zero in 2004 and 2007.

As illustrated in Figure 8<sup>5</sup> (see also Table 5), the largest number of Alaska subsistence halibut fishers in 2014 fished in waters of Regulatory Area 2C (Southeast Alaska)—2,670 (59%).<sup>6</sup> There were 1,460 subsistence halibut fishers (32%) who fished in Regulatory Area 3A (Southcentral Alaska); 257 (6%) in Area 4E (East Bering Sea Coast); 113 (3%) in Regulatory Area 3B (Alaska Peninsula); and 70 (2%) in Regulatory Area 4A (Eastern Aleutians). Additionally, there were 18 (<1%) subsistence halibut fishers in the 3 other regulatory areas. As also shown in Figure 8, the distribution of subsistence fishers by regulatory area in 2014 was mostly similar to that of 2003–2012. From 2008 through 2012, there was a sharp decrease

5. 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, and 2014 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.

6. Because some SHARC holders fished in more than one regulatory area, the sum of fishers for each area exceeds the state total.

in the estimated number of halibut fishers in Area 4E, but the estimate of 257 fishers for 2014 reversed this trend. As discussed in Chapter 3, for the Area 4E case study 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, 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.

## **Estimated Alaska Subsistence Halibut Harvests in 2014 by SHARC Type and IPHC Regulatory Area**

Table 4 reports estimated Alaska subsistence halibut harvests for 2014 by SHARC type, IPHC regulatory area, and gear type (see also Appendix Table D-1 for detail by tribe and rural community). The total estimated subsistence halibut harvest in Alaska in 2014 was 40,698 fish ( $\pm 3.5\%$ ) for 760,469 lb (net weight;  $\pm 3.5\%$ ).<sup>7</sup> As estimated in pounds net weight, 56.3% of the subsistence halibut harvest (428,168 lb [ $\pm 3.8\%$ ]) was taken by fishers registered with tribes or rural communities in Regulatory Area 2C (Southeast Alaska) (Figure 9). (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 231,348 lb ( $\pm 8.1\%$ ; 30.4% of the state total). For Regulatory Area 4E (East Bering Sea Coast),<sup>8</sup> the estimated harvest for tribal and rural SHARC holders was 70,128 lb ( $\pm 13\%$ ; 9.2% of the net harvest weight). Harvests totaled 18,338 lb ( $\pm 16.8\%$ ; 2.4%) 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 7,196 lb ( $\pm 26.1\%$ ; 0.9% of the net harvest weight). For Regulatory Area 4C (Pribilof Islands), the estimated harvest for tribal and rural SHARC holders was 4,325 lb ( $\pm 109.7\%$ ; 0.6% of the net harvest weight). Tribes and communities in 4D (Central Bering Sea) harvested 579 lb ( $\pm 96.1\%$ ; 0.1% of the net harvest weight) and those in 4B (Western Aleutians) harvested 388 lb ( $\pm 63.5\%$ ; 0.1%) (Table 4).

The estimated subsistence harvest of 760,469 lb of halibut in 2014 represents an increase of 10.7% compared to the estimated harvest of 686,991 lb in 2012 (Figure 10). Harvests by tribal SHARC holders increased by 5.7% from 260,118 lb in 2012 to 274,952 lb in 2014. Tribal SHARC holders harvested 36% of the Alaska subsistence halibut harvest in 2014, compared to 38% in 2012. Subsistence halibut harvests by nontribal, rural resident SHARC holders increased by 13.7%, from 426,873 lb in 2012 to 485,517 lb in 2014. This group accounted for 64% of the statewide subsistence halibut harvests in 2014, compared to 62% in 2012.

Members of 59 Alaska tribes harvested subsistence halibut in 2014. In 4 others, SHARC holders fished but had no harvest. In 16 others, tribal members obtained SHARCs and returned surveys, but no one fished. Members of 13 other tribes held SHARCS, but no one returned a survey form. No one in the remaining 31 eligible tribes held a valid SHARC in 2014. As shown in Figure 11, members of the 15 tribes with harvests of about 5,000 lb or more accounted for 72% of the total subsistence halibut harvest by tribal members in 2014. These 15 tribes accounted for 61% of eligible tribal members (2,119 of 3,460) (Table 3). Members of the other 44 tribes with harvests accounted for about 28% of the total harvest by tribal members (Figure 11).

Residents of 57 eligible rural communities harvested subsistence halibut in 2014.<sup>9</sup> In 2 others, individuals obtained SHARCs but no one fished. Residents of 7 other eligible rural communities obtained SHARCs,

7. This approximates 1,013,956 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.

8. 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 2014, a total of 5,533 lb net weight of halibut was retained by 3 organizations: Coastal Villages Regional Fund (963 lb), Bristol Bay Economic Development Corporation (3,456 lb), and Norton Sound Economic Development Corporation (1,114 lb) (Williams 2015). 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.”

9. 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

but no one returned a survey form. No one in the remaining 52 eligible rural communities held a valid SHARC as a nontribal member in 2014.<sup>10</sup> As shown in Figure 12, 9 rural communities with harvests of over 10,000 lb accounted for 76% of the subsistence halibut harvest by the holders of rural (nontribal) SHARCs in 2014. Residents of the other 48 communities with harvests accounted for 24% of the total harvest by rural SHARC holders.

As also shown in Figure 12, rural SHARC holders from 2 communities accounted for 38% of the total harvest by this group in 2014: Kodiak (22%) and Sitka (16%). Adding Petersburg, the next highest rural community harvest at 9%, the top 3 rural communities accounted for 47% of the rural community (nontribal) subsistence halibut harvest in Alaska in 2014.

## **Estimated Alaska Subsistence Halibut Harvests in 2014 by Harvest Location**

Survey respondents were asked to report the “water body, bay, or sound [that they] usually fished” for subsistence halibut in 2014. Multiple responses were permitted. In Table 5, estimated subsistence halibut harvests are reported for the 8 Alaska halibut regulatory areas and 18 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) accounted for 56% of the Alaska subsistence halibut harvest in 2014 (422,971 lb [net weight]) (Figure 13; Table 5). Also, as shown in figures 14 and 15, the 3 geographic subareas with the largest subsistence halibut harvests in 2014 were in Area 2C: southern Southeast Alaska (239,976 lb [net weight]; 32% of the state total); the northern Southeast Alaska area other than the Sitka Local Area Management Plan (LAMP) area (101,802 lb; 13%), and the Sitka LAMP area (81,193 lb; 11%).<sup>11</sup> Regulatory Area 3A (Southcentral Alaska) ranked second, with 32% of the state’s total subsistence halibut harvest (241,369 lb [net weight]). Waters bordering the Kodiak Island road system (including Chiniak Bay) ranked fourth among subareas, with a subsistence halibut harvest of 71,538 lb (9% of the state total), and other Kodiak Island waters not along the road system area (“Kodiak Island–Other”) ranked sixth (63,578 lb; 8%). Harvests within Cook Inlet waters of Area 3A accounted for 7% of the state total (50,365 lb; ranking seventh), those within Prince William Sound added 43,805 lb (6% of the statewide total; ranking eighth), and the Yakutat Area added 12,082 lb (2%). Among regulatory areas, Area 4E (East Bering Sea Coast) ranked third with 71,327 lb (9%). Most of the harvest in Area 4E came from the Yukon–Kuskokwim Delta area (69,765 lb; ranking fifth among subareas), with a smaller amount from Norton Sound and Bristol Bay. Area 3B (Alaska Peninsula, including the Chignik Area) ranked fourth with 2% of the Alaska total (13,378 lb). Area 4A (Eastern Aleutian Islands) ranked fifth with 7,727 lb (1%), and Area 4C (Pribilof Islands) ranked sixth with 3,389 lb (less than 1%). Area 4B (Western Aleutian Islands) added 254 lb (less than 1%); and Area 4D (Central Bering Sea) added 54 lb (less than 1%).

Figure 16 reports estimated harvests in pounds net weight by location fished at the regulatory area level in 2003–2012 and 2014. Table 6 compares estimated subsistence halibut harvests by regulatory area and geographic area in 2014 with those estimated for 2003–2012 and for the 10-year average from 2003–2012. As noted previously, for the state overall, the estimated harvest in pounds increased by about 11% in 2014 from 2012 (Figure 17; Table 6). However, the estimated harvest in 2014 was 20% lower than average for the first 10 years of the subsistence halibut harvest monitoring program (Figure 18).

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counted as part of Unalaska for the same reason. Because some residents of eligible rural areas had mailing addresses in non-eligible communities, 6 non-eligible communities are listed as “rural communities” in Table 3. These were Anchorage (1 SHARC), Homer (3 SHARCs), Juneau (11 SHARCs), Ketchikan (28 SHARCs), Valdez (1 SHARC), and Ward Cove (4 SHARCs). These 6 places are not included in this count of participating communities.

10. Note that residents of these communities may have obtained SHARCs as tribal members.

11. 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.

Estimated subsistence halibut harvests increased in 4 of the 8 regulatory areas in 2014 compared to 2012, and decreased in the other 4 (Figure 16; Figure 17; Table 6). As in the first 10 years of the project, Area 2C (Southeast Alaska) accounted for the most subsistence halibut harvests in 2014 (422,971 lb; 56% of the state total); this harvest represents an increase of 7% compared to 2012 (Table 6; Figure 16; Figure 17), but a 17% decrease compared to the 10-year average from 2003–2012 (Figure 18). Harvests increased in all 3 of the subareas within Area 2C in 2014 compared to 2012: the Sitka LAMP Area was up by 9%, the remainder of northern Southeast by 22%, and the southern Southeast Alaska subarea by 1%. Harvests were lower in all 3 Southeast subareas compared to recent 10-year averages: 14% in southern Southeast Alaska, 30% in the Sitka LAMP area, and 13% 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.<sup>12</sup>

Estimated harvests in Area 3A (Southcentral Alaska) dropped for the eighth straight year. The 2014 harvest of 241,369 lb was a decline of 5% from the 2012 harvest of 253,516 lb. The estimated subsistence halibut harvest in Area 3A in 2014 was 28% lower than the previous 10-year average, and was the lowest estimate of any study year (Figure 18; Table 6). Area 3A accounted for 32% of the statewide subsistence halibut harvest in 2014, a drop of about 5 percentage points compared to other recent study years (Table 6). In Area 3A in 2014 compared to 2012, subsistence halibut harvests increased in the Prince William Sound subarea by 57%. Harvests dropped in the other 4 subareas: Yakutat, down 40%; Cook Inlet, down 23%; the waters of Kodiak Island along the road system, down 1%; and the remainder of the Kodiak Island area, down 6%. Harvests in 2014 were lower than the previous 10-year averages in all Area 3A subareas, although the difference for Prince William Sound was only 0.3%.

In Area 3B (Alaska Peninsula), harvests declined from 15,959 lb in 2012 to 13,378 in 2014 (down 16%) (Figure 16; Figure 17; Table 6). In Area 3B, the 2014 estimated harvest was the lowest of the 11 years of the project, 60% below the previous 10-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 2010:12)) 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 2 years of the harvest monitoring program. However, the number of SHARC holders for Area 3B tribes and rural communities decreased from 606 in 2008 to 309 in 2009, 369 in 2010, 358 in 2011, 338 in 2012, and 298 in 2014; this decline in program participation may partially explain the lower harvest estimates for 2009–2012 and 2014 (see discussion of Sand Point in Chapter 3) (Table 6).

Estimated subsistence halibut harvests in Area 4A (Eastern Aleutians) dropped 19% from 2012 (9,543 lb) to 2014 (7,727 lb). The harvest in Area 4A in 2014 was 65% lower than the previous 10-year average (Figure 18). There are only 3 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 or 2014; therefore, there is no estimated subsistence halibut harvest for this community. For 2009, an increased harvest by SHARC holders living in Unalaska–Dutch Harbor, from 13,710 lb in 2008 to 29,306 lb in 2009, accounted for most of the change in the regulatory area's estimate between those 2 years, but estimated harvests in that community dropped to 13,081 lb for 2010, 12,257 lb for 2011, 10,059 for 2012, and 8,887 for 2014 (Table 9).

In Area 4B (Western Aleutians) there was a large decrease of 85% in the estimated subsistence harvest of halibut in 2014 (254 lb) compared to 2012 (1,698 lb); the 2012 estimate was a 216% increase compared to 2011 (537 lb) (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 5-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 average weight of subsistence harvested halibut in Area 4B in 2009 was only 15.4 lb (see Table 9 in [Fall and Koster 2011]) and 12.6 lb

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12. Further discussion of differences between harvest estimates for 2003–2012 and 2014 appears in Chapter 3 and Chapter 4.

in 2010 (see Table 9 in [Fall and Koster 2012]), but rose to 20.1 lb in both 2011 and 2012 and 20.0 lb in 2014 (see Table 8 below). The estimated harvest for Area 4B was 86% below the previous 10-year average (Figure 18), and the lowest of any year of the harvest monitoring program (Table 6).

Estimated subsistence harvests of halibut in Area 4C (Pribilof Islands) increased 118% in 2014, to 3,389 lb, from 1,176 lb in 2012 (Figure 16; Figure 17; Table 6). However, the 2014 estimate was 62% below the previous 10-year average and the third-lowest since the SHARC program began in 2003 (Figure 18; Table 6). As noted in reports for previous project years (Fall, George, and Easley 2005:15; Fall and Koster 2008:15), a high response rate to the survey, based upon 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 did not take place for 2008–2012 or 2014. 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, increasing to 27 in 2014. The response rate to the survey declined from 83% in 2007 to 45% in 2008, 34% in 2009, 29% in 2010, 35% in 2011, 25% in 2012, and 30% in 2014. The estimated number of subsistence halibut fishers in the community was 17 in 2014, compared to 12 in 2012 and a range of 14–19 in 2007–2010 that then dropped to 11 in 2011. In addition, only 2 residents of St. George held SHARCs in 2012 or 2014, and no surveys were returned from this community in either year. The extent to which the decline in the survey response rate has affected harvest estimates for Area 4C is uncertain.

In Area 4D (Central Bering Sea), the subsistence halibut harvest estimate for 2014 of 54 lb was 92% lower than the estimate of 672 lb for 2012. The 2014 estimate was 99% lower than the previous 10-year average for Area 4D, and by far the lowest annual estimate for the area since the SHARC program began in 2003 (Figure 16; Figure 17; Figure 18; Table 6). It is likely that this 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, 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, and 6 SHARC holders and 1 fisher in 2014.

For Area 4E (East Bering Sea Coast), the estimated subsistence harvest of halibut of 71,327 lb in 2014 was a 751% increase from the 8,384 lb estimated for 2012, and 131% higher than the 10-year average from 2003–2012 (Figure 16; Figure 17; Figure 18; Table 6). The 2014 estimated harvest was the highest for this area since the survey began in 2003. In 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 noted in Chapter One, outreach and interviewing of likely subsistence halibut fishers who did not hold SHARCs took place in Toksook Bay and Tununak for 2014. Thus the harvest estimate for Area 4E for 2014 likely is based on a far more complete sample of halibut fishers than was achieved for 2008 through 2012.

Figure 19 illustrates the average subsistence halibut harvest in pounds net weight for those SHARC holders who subsistence fished in 2014. Figure 20 illustrates the average harvest per fisher in numbers of halibut. For the state overall, the average subsistence halibut fisher harvested 169 lb (net weight) or about 9.0 halibut in 2014. Average harvests per fisher at the regulatory area level ranged from 45 lb (net weight) in Area 4D to 293 lb per fisher in Area 4C. Average subsistence halibut harvests have ranged from 8.1 halibut per fisher in 2011 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; Fall and Koster 2013:14; see also Table 11).

## **Subsistence Halibut Harvests by Place of Residence**

As shown in Figure 21, there were 26 Alaska communities whose residents had combined estimated subsistence halibut harvests of approximately 5,000 lb or more (net weight) in 2014. 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.<sup>13</sup> Residents of these communities accounted for 89% of the total Alaska subsistence halibut harvest in 2014. 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 15.5% of the total Alaska harvest, and Sitka ranked second with about 12%. With 13,042 and 9,061 residents, respectively, these 2 communities included about 25.4% of the population of rural communities eligible to participate in the subsistence fishery. There were 83 other Alaska communities with at least 1 resident who participated in the subsistence halibut fishery in 2014. The total harvest for these other communities represented about 11% of the state total.

For 2014, 68 SHARC holders provided out-of-state addresses from 48 communities in 14 states, provinces, and territories.<sup>14</sup> Two non-Alaska-resident SHARC holders subsistence fished for halibut in 2014, with a harvest of 34 fish and 520 lb (0.07% of the state total) (Appendix Table D-2). This level of involvement by non-Alaska residents in the subsistence halibut fishery in 2014 is similar to that of other study years (Fall and Koster 2012, 14).

## **Subsistence Harvests by Gear Type**

Table 4 and Figure 22 report the estimated subsistence harvests of halibut in Alaska in 2014 by gear type and regulatory area fished. In total, 538,015 lb (71%) 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 222,455 lb (29%) were harvested using hand-operated gear (i.e., handlines or lines attached to a rod or pole). As in past years, there were notable differences between regulatory areas (Table 4; Figure 22). Harvests using setline gear predominated in Area 2C (Southeast Alaska; 81% of the area’s total subsistence harvest), 3A (Southcentral Alaska; 70%), 3B (Alaska Peninsula; 59%), 4A (Eastern Aleutian Islands; 76%); 4B (Western Aleutian Islands; 63%), Area 4C (Pribilof Island; 100%), and Area 4D (Central Bering Sea; 100%). Most halibut in Area 4E (East Bering Sea Coast; 86%) 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 2014. 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) (Figure 23). The next most frequently reported number was 20 hooks, usually used by 16% of the fishers who used setline gear. Fifteen hooks (12%) ranked third, followed by 25 hooks (7%) and 10 hooks (5%). 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 6 regulatory areas (Table 7): 2C (Southeast Alaska), 40%; 3A (Southcentral Alaska), 50%; 3B (Alaska Peninsula), 31%; 4A (Eastern Aleutian Islands), 42%; 4C (Pribilof Islands), 67%; and 4E (East Bering Sea Coast), 58%. In Area 4B (Western Aleutian Islands), 39% used 1 hook and 24% used 20 hooks. In Area 4D (Central Bering Sea), 55% used 20 hooks and 46% used 30 hooks.

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13. Note that nonrural places, such as Anchorage, Juneau, Ketchikan, and Valdez, 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.

14. Note that members of eligible tribes may obtain SHARCs regardless of their place of residence.

## Number of Subsistence Halibut Fishing Trips

For 2014, for the fifth 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 4.5, very similar to other study years (Fall and Koster 2013:15), with those holding tribal SHARCs averaging 5.2 trips and those holding rural SHARCs averaging 4.2 trips. In most regulatory areas, the average subsistence fisher took between 4 and 5 trips, with a higher average in Area 4C (average of 9.7 trips) and Area 4E (average of 7.8 trips) (Figure 24). As shown in Figure 25, about 77% of fishers took 5 or fewer trips, and about 16% took between 6 and 10 trips. About 5 percent took between 11–20 trips, and about 1% took more than 20 trips.

The average number of subsistence halibut harvested per fishing trip in 2014 was 2.0 (compared to 1.8 in 2009, 2010, and 2011, and 1.9 in 2012), with tribal SHARC holders averaging 2.3 fish and rural SHARC holders averaging 1.9 fish. The highest average harvests per trip occurred in Area 4C (3.3 fish per trip) and Area 4E (2.8 halibut per trip) (Figure 26).

## 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 2014.” They were instructed not to include fish they considered sport caught as part of their subsistence halibut harvest. The goal of this question was to avoid double counting harvested halibut 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 2014, 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 2 or fewer hooks. Note that the project findings do not represent the total recreational halibut harvest by residents of eligible communities and tribes in 2014 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 2014 was 8,543 fish and 150,717 lb (net weight). By area fished, most of the sport halibut harvest by SHARC holders occurred in Area 2C (Southeast Alaska) (96,990 lb; 64%) and Area 3A (Southcentral Alaska) (50,388 lb; 33%) (Table 5). In total, an estimated 2,228 SHARC holders (23%) reported that they sport fished for halibut in 2014 (Table 5). A large proportion of these fishers fished in either Area 2C (1,424; 64%) or Area 3A (781; 35%) (Table 5). (See Appendix Table D-5 for estimated sport halibut harvests by tribe and nontribal rural community SHARC holders.)<sup>15</sup>

## 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 2014, based upon estimates provided by survey respondents. For the state, the estimated average net weight of

15. 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, Koster, and Davis (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 1 or 2 halibut with a rod and reel were considered “sport” by some respondents, but if they harvested more than 2 fish with rod and reel in 1 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.

subsistence-caught halibut was 18.7 lb and the average net weight of sport-harvested halibut by SHARC holders was 17.6 lb. For all halibut reported as harvested by SHARC holders in 2014, the average net weight per harvested halibut was 18.5 lb. Between regulatory areas, there was a range of average weights per halibut. Halibut harvested in the subsistence fishery in Areas 4A (20.9 lb per fish), 2C (20.5 lb), and 4B (20.0 lb) were larger than the state average. In 2014, in Area 4E, halibut harvested in the subsistence fishery averaged 13.1 lb, 70% of the statewide average subsistence-harvested halibut. Halibut harvested in Area 4C, with an average net weight of 7.6 lb per fish, were 41% of the state average.

The average weight of halibut harvested in the Alaska subsistence fishery declined steadily over the first 6 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, and 18.5 lb in 2012 (Fall and Koster 2014:16). Thus the average of 18.7 lb per halibut in the subsistence fishery in 2014 suggests that, statewide, there has been little change in the average size since 2008.

### 3. DISCUSSION

#### 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 2 hooks, and that removed the restrictive daily harvest limit of 2 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 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 2012 and 2014 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. We will not repeat that full discussion here.<sup>16</sup> However, the report also concluded that because of the limitations associated with the previous subsistence harvest estimates at the statewide level, until 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 9 communities to represent communities of similar size and location. Data for these 9 communities are updated in Table 9. In this report, discussion is limited to 3 communities for which new outreach efforts took place for the 2014 harvest year: Sand Point, Toksook Bay, and Tununak. Appendix tables D-2, D-3, and D-4 report project results for 2014 for all communities, based upon residence of SHARC holders.

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16. 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)2003.”, “publisher”: “Alaska Department of Fish and Game, Division of Subsistence, Technical Paper No. 288”, “publisher-place”: “Juneau”, “genre”: “Technical Paper”, “event-place”: “Juneau”, “abstract”: “This report presents findings of a study designed to estimate the subsistence harvest of Pacific halibut *Hippoglossus stenolepis* in Alaska in 2003. The ADF&G Division of Subsistence conducted the study under contract to the National Marine Fisheries Service (NMFS 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 million pounds net weight (68 FR 18145, April 15, 2003, EA/RIR [North Pacific Fishery Management Council 2003]).

## **Sand Point (Regulatory Area 3B)**

The population of Sand Point in 2010 was 976 with 417 Alaska Natives; the estimated population in 2014 was 946 (Table 1). The only estimate of halibut harvests for home use by Sand Point residents based on Division of Subsistence household surveys prior to 2003 is for 1992 (Fall et al. 1993), at 13,981 lb (net weight). Of this, 6,240 lb (45%) were removed from commercial harvests, 6,934 lb (49%) were taken with subsistence methods (setline or jigging with a hand-held line) and 807 lb (59%) were harvested with rod and reel. The total harvest with noncommercial methods was 7,741 lb. Of the 204 permanent households in the community, 122 harvested halibut for home use; 65 used “subsistence methods,” 16 fished with rod and reel, and the rest obtained halibut for home use from their commercial harvests.

At the end of 2003, 73 residents of Sand Point had obtained SHARCs. The estimated subsistence halibut harvest for 2003 was 4,819 lb (net weight), based on the SHARC survey. Twenty-one Sand Point residents reported that they subsistence fished for halibut in 2003. In addition, 11 Sand Point SHARC holders reported that they harvested an estimated 410 lb of halibut while sport fishing, for a total estimated noncommercial harvest of 5,229 lb of halibut (Table 9). These were lower harvests and levels of participation than might be expected, considering the 1992 survey findings.

By December 31, 2004, 351 Sand Point residents had obtained SHARCs, a very substantial increase over 2003. The estimated total subsistence halibut harvest was 11,355 lb (net weight). In total, an estimated 109 Sand Point SHARC holders subsistence fished for halibut in 2004, about 5 times the estimate for 2003. Also, an estimated 50 Sand Point SHARC holders sport fished for halibut, with an estimated total harvest of 1,384 lb. In total, 121 Sand Point SHARC holders fished for halibut noncommercially in 2004 and had a total estimated harvest of 12,739 lb (net weight; Table 9). This is more than double the 2003 estimate, and similar to the total community estimate for 1992 (which included halibut removed from commercial harvests). The summary report for 2004 speculated that “it is likely that the higher estimate for 2004 does not indicate an increased harvest by Sand Point residents over 2003, but rather a more complete estimate due to much larger number of participants in the SHARC program” (Fall, George, and Easley 2005:28).

From 2005 through 2008, between 321 (in 2005) and 365 (in 2006) Sand Point residents held SHARCs. Estimated harvests by SHARC holders in the subsistence and sport fisheries ranged between 23,182 lb (2005) and 27,649 lb (2007) (Table 9). The increase in the total halibut harvest, especially the increase in setline harvests (which ranged between 7,406 lb and 15,766 lb), suggested that Sand Point residents were increasingly participating in the opportunities provided by the federal subsistence halibut fishery.

The majority of SHARCs issued to Sand Point residents expired during 2008 and were not renewed. The number of active SHARCs during 2009 was 137, down 60% from the 342 active SHARCs in 2008. Correspondingly, based on survey responses, estimates of participation in the subsistence halibut fishery in Sand Point in 2009 and estimated harvests were down substantially from 2005–2008. During 2009, an estimated 70 Sand Point residents participated in the subsistence halibut fishery, compared to 130 in 2008. In total, the noncommercial halibut harvest estimate for Sand Point in 2009 was 14,424 lb, with 70 people involved in this harvest; this harvest was 55% of the annual average of the previous 4 years (Table 9).

The survey findings for Sand Point for 2010 illustrated the pattern first noted for 2009 of declining estimates of harvests and participation in the subsistence halibut fishery that may be the result of lowered rates of participation in the SHARC program. In 2010, the number of active SHARCs in Sand Point dropped to 130, the lowest since 2003. An estimated 61 SHARC holders participated in the subsistence fishery, again the lowest numbers since 2003. The total noncommercial halibut harvest for Sand Point in 2010 was 8,435 lb, again lower than any year but 2003.

In 2011, 136 Sand Point residents held SHARCs, consistent with totals since 2009. An estimated 85 SHARC holders participated in the subsistence fishery; 23 sport-fished for halibut, resulting in an estimate of 87 halibut fishers in 2011, higher than either 2009 or 2010 but notably lower than the peak years of 2004–2008. The total harvest estimate of 14,640 lb of halibut in 2011 was a substantial increase of 74% over 2010, but remained much lower than the range of 23,182 lb to 27,649 lb from 2005 to 2008.

In 2012, 136 Sand Point residents held SHARCs, again consistent with totals since 2009. An estimated 61 SHARC holders participated in the subsistence fishery; 32 sport-fished for halibut, resulting in an estimate of 75 halibut fishers in 2012, higher than either 2009 or 2010 but notably lower than the peak years of 2004–2008. The total harvest estimate of 6,989 lb of halibut in 2012 was a substantial decrease of 52% from 2011, and was the lowest estimate since 2003, the first year of the harvest monitoring program.

In 2014, 92 Sand Point residents held SHARCs, the lowest total since 2003. As discussed in Chapter One, staff traveled to Sand Point to interview SHARC holders who had not responded to the survey as well as former SHARC holders who had indicated fishing in the past. This outreach increased the potential number of subsistence halibut fishers in 2014 to 139, which is similar to the number of SHARC holders from 2009 through 2012. An estimated 64 Sand Point residents participated in the subsistence halibut fishery, compared to a range of 61 to 85 from 2009 through 2012. The number of participants in the sport fishery was only 3, with no harvest, compared to a range of 11 to 50 participants from 2003 through 2012 and sport harvests ranging from about 1,129 lb to 6,300 lb. The estimated subsistence harvest for 2014 was 6,387 lb, the third lowest of the 11 annual estimates.

Following the fieldwork for 2014, the Qagan Tayagungin Tribal Council expressed several concerns about halibut, which were forwarded to the division. Council members reported that the local commercial individual fishing quota (IFQ) has been declining. It has also become more difficult for subsistence fishers to harvest halibut; one reason offered was a high mortality of halibut bycatch in the commercial cod fishery. There were also some concerns that due to the location of the shore based fish processing facilities in Sand Point, many commercial halibut fishers operate close to the community to save fuel and for safety; however this results in more pressure on the local halibut stocks available for local subsistence fishers.

Because of this wide range of harvest estimates from 2003 through 2014, continued outreach in Sand Point will be necessary to understand trends of the subsistence halibut fishery in the community.

### **Toksook Bay (Regulatory Area 4E)**

Toksook Bay had a population of 590 in 2010 and 623 in 2014 (Table 1). The number of valid SHARCs held by Toksook Bay residents dropped from 533 (approximating the community's total population) in 2007 to 34 in 2008 and just 7 in 2012 and 2014. Very few SHARCs that had been obtained in 2003 and that expired at the close of 2007 were renewed. 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; 16,800 lb round weight) for this community for 2000, based upon a 1986 per capita estimate for the neighboring community of Tununak. During SHARC project years from 2003–2007, Division of Subsistence staff, with the assistance of the Toksook Bay tribal government, evaluated the list of SHARC holders in the community, estimated the total number of subsistence halibut fishers, and conducted interviews with likely fishers. Based on the results of this collaboration with the tribal government, it is highly likely that most community residents who subsistence fished for halibut in 2003–2007 provided harvest data through the SHARC survey. Therefore, harvest estimates for Toksook Bay for 2003–2007 represent the harvests reported by respondents to the survey and are not expanded to the total number of SHARC holders in the community. Project staff consider harvest data for these years to be reliable. In 2008–2012, however, no outreach or interviewing occurred in Toksook Bay. Of 34 SHARC holders in 2008, 11 (32%) responded to the mailed survey, as did 13 (39%) of 33 in 2009, 12 (38%) of 32 in 2010, and 13 (41%) of 32 in 2011. Of the 7 SHARC holders in 2012, 6 (86%) returned the survey. Unlike 2003–2007, returned survey data were expanded to estimate 2008–2012 halibut harvests in Toksook Bay.

The annual report for study year 2010 (Fall and Koster 2012:32–34) presented an overview of harvests and participation levels in the subsistence halibut fishery for Toksook Bay for 2003 through 2010, as well as U32 (under 32 inches in length) halibut retained for home use from commercial harvests by members of the Coastal Villages Regional Fund Community Development Quota (CDQ) group, the majority of which are landed at Toksook Bay. As summarized in Table 9, from 2003 through 2007, subsistence halibut harvests ranged widely, from 6,596 lb in 2004 to 36,481 lb in 2006. The number of subsistence halibut fishers in

Toksook Bay ranged from 54 in 2003 to 113 in 2006. In all study years, hand-operated gear accounted for most of the harvest.

As noted above, the number of valid SHARCs for Toksook Bay dropped to 34 in 2008. Based on the SHARC survey returns (11 of 34; 32%), 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. For example, based on the survey results, just 9 Toksook Bay residents participated in the subsistence halibut fishery in 2008, compared to an average of 73 for the previous 5 years (range 54 to 113; Table 9). The estimated harvest was 2,143 lb in 2008, while the previous 5-year average was 18,074 lb (range 6,596 to 36,481 lb). Results for 2009 were similar to those of 2008 and results for 2010 and 2011 continued trends observed for 2008 and 2009 (Table 9)

In 2012, only 7 SHARCs were active in Toksook Bay, again suggesting that many subsistence fishers are not participating in the program. Based on returned surveys (6 of 7; 86%), the estimated subsistence halibut harvest was 294 lb, with just 140 lb (48%) taken with hand-operated gear. This harvest was just 2% of the annual average from 2003–2007 (18,074 lb). The estimated number of subsistence halibut fishers in Toksook Bay in 2012 was 5, compared to 113 in 2006 and an average of 79 from 2003–2007.

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, as discussed in Chapter One, for 2014, 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, only 7 of whom held SHARCs in 2014. A sample of 76% was achieved. The estimated subsistence harvest was 32,023 lb by 121 fishers. The 2014 estimated harvest was the second highest since 2003 and similar to the 36,481 lb harvest for 2006 when household surveys were also conducted. The estimated number of fishers was similar to those of 2006 and 2007 (Table 9). These findings confirm that harvest estimates from 2008 through 2012 based on SHARC registrations alone significantly underestimated halibut harvests in the community.

## **Tununak (Regulatory Area 4E)**

Tununak had a population of 327 in 2010, with 314 Alaska Natives; the population estimate was 384 in 2014 (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  $\pm 26\%$ . The harvest per capita was 93 lb (net weight) (CSIS).

No residents of Tununak obtained SHARCs in 2003,<sup>17</sup> and the Traditional Elders’ Council in Tununak did not approve Division of Subsistence plans to conduct interviews with potential subsistence halibut fishers for 2003. Therefore, there is no subsistence halibut harvest estimate for this community for 2003. By the close of 2004, however, 70 residents of Tununak had obtained SHARCs (Table 9). Because only 9 SHARC holders responded to the postal survey (13%), harvest estimates for Tununak for 2004 are based on a very low sample achievement. The estimated total subsistence halibut harvest was 1,954 lb (net weight) by 31 fishers, 878 lb harvested with setline gear and 1,076 lb with hand-operated gear. No Tununak SHARC holders reported sport fishing activity in any study year.

The tribal government supported Division of Subsistence interviewing of subsistence halibut fishers in Tununak for the 2005 project year (Fall, Koster, and Davis 2006:5). Thirty-three of 70 SHARC holders were interviewed (47%). As in Toksook Bay, reported harvests were not expanded for Tununak for the 2005 project year because most known halibut fishers were interviewed. The total subsistence harvest of halibut was 2,661 lb by 20 fishers. Most of the harvest (88%) was taken with hand-operated gear (Table 9).

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17. One tribal member obtained a SHARC, but this person was not a resident of Tununak.

In 2006, 70 Tununak residents held SHARCs. No interviewing took place in the community, but division staff attempted to contact SHARC holders by telephone. Sample achievement was low (10 of 70 SHARC holders; 14%). Based on this limited sample, the estimated subsistence halibut harvest at Tununak in 2006 was 4,032 lb by 33 subsistence fishers. Almost all of this harvest (3,808 lb; 94%) was with hand-operated gear (Table 9).

In 2007, 69 Tununak residents held SHARCs for a part of the year. With the support of a short-term contract with the division, staff of the Tununak IRA council conducted interviews in their community to supplement SHARC survey data. The estimated subsistence harvest in Tununak in 2007 was 7,015 lb by 38 fishers. Most of this harvest (5,479 lb; 78%) was taken with hand-operated gear (Table 9).

In 2008, 68 Tununak residents held SHARCs. No outreach or supplemental interviewing took place in the community in 2008. The response rate to the mailed survey was 10% (7 of 68 SHARC holders). Estimated harvested based on this sample were by far the lowest of any project year up to that point: 1,296 lb, all with hand-operated gear by an estimated 8 fishers (Table 9). This was almost certainly a large underestimation of the subsistence harvest of halibut in Tununak in 2008.

Few of the SHARCs active in 2008 in Tununak were renewed and only 11 were active in 2009; 6 (55%) responded to the survey. An estimated 7 subsistence fishers harvested 488 lb of halibut in 2009, all with hand-operated gear (Table 9). Due to the very limited participation in the SHARC program and based on results from 2004–2007, it is highly likely that a reliable estimate of subsistence halibut harvests in Tununak was not obtained for 2009.

As in 2009, only 11 SHARCs were active in Tununak in 2010; 3 (27%) responded to the survey. An estimated 9 subsistence fishers harvested 576 lb of halibut in 2010, all with hand-operated gear (Table 9). Due to the very limited participation in the SHARC program and based on results from 2004–2007, it is highly likely that, as for 2009, a reliable estimate of subsistence halibut harvests in Tununak was not obtained for 2010.

Similarly, only 11 SHARCs were active in Tununak in 2011. An estimated 4 SHARC holders fished, for an estimated harvest of 84 lb, all with hand-operated gear. In 2012, 11 Tununak residents had SHARCs. An estimated 3 SHARC holders fished for halibut, with an estimated harvest of 173 lb, all with hand-operated gear (Table 9). As for 2008–2010, it is unlikely that study results for 2011 and 2012 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).

As discussed in Chapter One, for the 2014 study year, division researchers traveled to Tununak and with the assistance of key respondents, identified 81 potential subsistence halibut fishers, only 5 of whom held a SHARC in 2014. Based on a 77% sample, the estimated subsistence halibut harvest 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 9). This result suggests that subsistence halibut harvests in Tununak have been substantially underestimated since the SHARC program began in 2003.

## **COMPARISONS WITH NONSUBSISTENCE REMOVALS IN 2014**

As reported in Table 18, the preliminary estimated total halibut removal in Alaskan waters in 2014 was 33,804,002 lb (net weight) based on data compiled by the IPHC (International Pacific Halibut Commission 2015; Williams 2015) and this project. In this total, the removal of 5,533 lb of U32 (under 32 inches in length) halibut for personal use by CDQ organizations in Area 4D and Area 4E has been added to the subsistence harvest category. Commercial harvests accounted for 49.2% of halibut removals in Alaska in

2014 (Figure 27). Bycatch mortality of halibut in various other commercial fisheries ranked second, with 22.6% of the statewide removals. Sport fisheries (harvests and other mortalities) ranked third, with 16.9%. Non-harvest mortalities (formerly called “wastage”) in the commercial halibut fishery added 3.0% to the total halibut removals, and IPHC research accounted for 1.9%. The subsistence fishery accounted for 2.3% of the total removals of halibut in Alaska waters in 2014.

Halibut harvests by fishery in 2014 at the regulatory area level did not differ substantially from the statewide pattern (Table 10; Figure 28). In all regulatory areas but 4E, commercial harvests accounted for 49% or more of the total pounds net weight of halibut removals; commercial harvests were 33% of removals in Area 4E. In Area 2C (Southeast Alaska) and Area 3A (Southcentral Alaska), sport fisheries took 33.6% and 27.0%, respectively, of the halibut harvest in 2014; however, sport fisheries were just 0.4% of the total harvest in Area 3B (compared to 0.3% for the subsistence harvest) and in Area 4 just 0.2%, compared to subsistence harvests of 0.9%. Commercial bycatch accounted for 63.4% of halibut removals in Area 4. As a percentage of the total removal, subsistence halibut harvests were largest in Area 2C at 7.1% of the total (although they were 21% of the sport harvest and about 13% of the commercial harvest) and in Area 3A at 1.8%.

## 4. CONCLUSIONS AND RECOMMENDATIONS

### SUMMARY AND CONCLUSIONS

New federal regulations governing subsistence halibut fishing in Alaska went into effect in May 2003. The 2014 calendar year was the 11<sup>th</sup> 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 9,719 potential halibut fishers, 6,336 (65%) voluntarily provided information about their subsistence halibut fishing activities in 2014 by responding to the mail survey or agreeing to be interviewed. This was the 4<sup>th</sup> highest response rate for the program, which has ranged from 58% in 2007 to 71% in 2012 (Table 11).

In 2014, the number of potential subsistence halibut fishers (9,719) dropped 2% from the number of valid SHARCs for 2012, and was 22% lower than the 10-year average from 2003–2012 (Table 11). The 2014 total includes potential subsistence fishers in four communities who did not hold SHARCS; there were 9,474 valid SHARCs in 2014, a drop of 5% from 2012. See Fall and Koster (2014:33–35) for a discussion of SHARC renewal patterns for 2003–2012.

Based on the survey returns, an estimated 4,506 individuals participated in the Alaska subsistence halibut fishery in 2014. This is a 3% increase over 2012, but is 15% lower than the 10-year average from 2003–2012. The estimated subsistence harvest of halibut in Alaska in 2014 is 40,698 fish and 760,469 lb., higher than either 2011 or 2012 and reversing a downward trend that began in 2006. However, as measured in pounds, the 2014 subsistence halibut harvest was the 3<sup>rd</sup> lowest of any study year and 20% lower than the 10-year average from 2003–2012 (Table 11). The total estimated harvests for 2003–2012 and 2014 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 <http://www.fakr.noaa.gov/frules/70fr16742.pdf>, page 16748; (North Pacific Fishery Management Council 2003). The larger estimated harvest in 2004 compared to 2003 most likely corresponded to the greater number of individuals who held SHARCs through December 2004 and a proportional increase in the number of individuals who subsistence fished for halibut. The leveling off and slight decline in the harvests in 2006 and 2005, compared to 2004, are consistent with the leveling-off of the number of individuals who held SHARCs for at least a portion of these years. However, harvests as estimated in pounds dropped in 2007 despite an increase in individuals who held a SHARC for at least part of the year. In 2008, estimated harvests dropped by 14% and the number of SHARC holders dropped by 23%; in 2009, the number of SHARC holders rose slightly (1.5%) while the harvest dropped by 0.1%; in 2010 both the number of SHARC holders and the harvest dropped by about 7% compared to the previous year. Study year 2011 continued the trend of lower harvests begun in 2004, and was 12% below the estimated harvest for 2010 despite a 2% increase in the number of SHARC holders. In 2012, the number of SHARCs dropped 11% while the estimated harvest declined 2%. The higher estimate for 2014 was in part a result of outreach and households surveys in 2 key fishing communities in Area 4E. Without this outreach, harvest estimates for Area 4E and the state overall would likely have been very close to the low estimates for 2011 and 2012.

Average harvests per fisher in the subsistence halibut fishery in 2014 at 9.0 fish and 169 lb rose from the 8.4 fish and 156 lb estimated for 2012. The average harvest per fisher in pounds was 5% below the average of the previous 10 annual estimates, during which on average subsistence fishers harvested between 148 lb (in 2011) and 211 lb (in 2003) (Table 11).

Over the 11 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 11). The average weight of a subsistence-caught halibut dropped 21% from 2003 to 2014.

After 11 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 and 2014 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 11 project years. On the other hand, decreases in subsistence halibut harvests in Area 2C appear to reflect declining success in harvests and smaller fish.

In 2014, most subsistence halibut were harvested with setline (stationary) gear (71%) and the rest with hand-operated gear (29%) (Table 5). The portion of the subsistence halibut harvested with set lines has ranged since 2003 from 69% in 2007 to 77% in 2010 and 2011 and 78% in 2012.

The largest portion of the Alaska subsistence halibut harvest in 2014 occurred in Regulatory Area 2C (Southeast Alaska), at 56% (422,971 lb), followed by Area 3A (Southcentral Alaska) at 32% (241,369 lb), Area 4E (East Bering Sea Coast) at 9% (71,317 lb), Area 3B (Alaska Peninsula) at 2% (13,378 lb), Area 4A (Eastern Aleutian Islands) at 1% (7,727 lb), Area 4C (Pribilof Islands) less than 1% (3,389 lb), Area 4B (Western Aleutian Islands) at less than 1% (254 lb), and Area 4D (Central Bering Sea) at less than 1% (54 lb) (Table 6; Figure 16). In 2003–2012, Area 2C (Southeast Alaska) and Area 3A (Southcentral Alaska) also accounted for most of the subsistence harvests. 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, but harvest estimates for this area for those years were likely too low. Area 4E accounted for between 2% and 6% of the statewide harvest from 2003 through 2007 and 9% in 2014 (Table 6).

The proportion of the statewide subsistence halibut harvest occurring in Area 2C (Southeast Alaska) ranged from 60% in 2003, 58% in 2012, and 57% in 2004, to between 51% and 56% from 2005 through 2012. The portion occurring in Area 3A (Southcentral Alaska) ranged from 27% in 2003 to between 32% and 39% from 2004 through 2012 and 2014 (Table 6). Subsistence harvests accounted for 2.3% of the total halibut removals in Alaska waters in 2014, compared to between 1.2% (in 2009) and 1.7% (in 2012).

As discussed above, although comparisons of the 2003–2012 and 2014 harvest estimates 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 11 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, 2014 marked the 11<sup>th</sup> year of documentation of the subsistence halibut harvests in Alaska after a one year hiatus. Due to budget constraints, the project will not continue for the 2015 harvest year. We conclude this report with the following recommendations for potential future research based on experiences during the 11 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 harvest estimates declined over the first 10-years of the monitoring program and increased slightly in 2014. 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 11 years of the project, 83,699 SHARC surveys were returned. 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 12 years that the regulations were 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, Koster, and Davis 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, Koster, and Turek 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, George, and Easley (2005:22–24). As discussed in Chapter 2 and Chapter 3, many SHARC holders also reported that they sport fished for halibut in 2003–2012 and 2014. 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. In summary, the results of a quantitative analysis of the 11 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.

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Table 1.—Population of rural communities eligible to participate in the Alaska subsistence halibut fishery, 2000, 2010, and 2014.

Community <sup>a</sup>	Regulatory area	Population				
		2000		2010		2014
		Total	Alaska Native	Total	Alaska Native	Total
Angoon	2C	572	419	459	405	416
Coffman Cove	2C	199	12	176	10	174
Craig	2C	1,397	432	1,201	378	1,198
Edna Bay	2C	49	2	42	0	46
Elfin Cove	2C	32	0	20	6	16
Gustavus	2C	429	32	442	30	516
Haines	2C	1,811	332	1,713	278	1,805
Hollis	2C	139	13	112	10	94
Hoonah	2C	860	597	760	502	787
Hydaburg	2C	382	342	376	324	405
Hyder	2C	97	4	87	5	91
Kake	2C	710	530	557	449	626
Kasaan	2C	39	19	49	22	75
Klawock	2C	854	496	755	446	802
Klukwan	2C	139	123	95	86	84
Metlakatla	2C	1,375	1,125	1,405	1,245	1,480
Meyers Chuck	2C	21	2			
Naukatik Bay	2C	135	13	113	9	121
Pelican	2C	163	42	88	36	75
Petersburg	2C	3,224	388	2,948	390	2,964
Point Baker	2C	35	3	15	2	13
Port Alexander	2C	81	11	52	3	45
Port Protection	2C	63	7	48	13	56
Saxman	2C	431	302	411	276	419
Sitka	2C	8,835	2,178	8,881	2,184	9,061
Skagway	2C	862	44	920	52	967
Tenakee Springs	2C	104	5	131	5	128
Thorne Bay	2C	552	27	471	23	530
Whale Pass	2C	58	2	31	1	39
Wrangell	2C	2,308	550	2,369	582	2,448
Census area balances <sup>d</sup>	2C			1,230		1,156
<b>Subtotal, Area 2C<sup>e</sup></b>		<b>25,956</b>	<b>8,052</b>	<b>25,957</b>	<b>7,772</b>	<b>26,637</b>
Akhiok	3A	80	75	71	62	81
Chenega Bay	3A	86	67	76	46	57
Cordova	3A	2,454	368	2,239	344	2,286
Karluk	3A	27	26	37	35	43
Kodiak <sup>b</sup>	3A	12,973	1,697	12,824	1,872	13,042
Larsen Bay	3A	115	91	87	66	71
Nanwalek	3A	177	165	254	227	275
Old Harbor	3A	237	203	218	194	213
Ouzinkie	3A	225	197	161	140	171
Port Graham	3A	171	151	177	160	168
Port Lions	3A	253	163	194	119	176
Seldovia	3A	286	66	420	121	403
Tatitlek	3A	107	91	88	58	98

- continued -

Table 1.–Page 2 of 4.

Community <sup>a</sup>	Regulatory area	Population				
		2000		2010		2014
		Total	Alaska Native	Total	Alaska Native	Total
Yakutat	3A	680	375	662	330	622
Census area balances <sup>d</sup>	3A					
<b>Subtotal, Area 3A</b>		<b>17,871</b>	<b>3,735</b>	<b>17,508</b>	<b>3,774</b>	<b>17,706</b>
Chignik	3B	79	48	91	56	96
Chignik Lagoon	3B	103	85	78	58	72
Chignik Lake	3B	145	127	73	70	70
Cold Bay	3B	88	15	108	20	89
False Pass	3B	64	42	35	27	34
Ivanof Bay	3B	22	21	7	7	7
King Cove	3B	792	379	938	384	905
Nelson Lagoon	3B	83	68	52	40	44
Perryville	3B	107	105	113	110	101
Sand Point	3B	952	421	976	417	946
Census area balances <sup>d</sup>	3B			5		0
<b>Subtotal, Area 3B</b>		<b>2,435</b>	<b>1,311</b>	<b>2,476</b>	<b>1,189</b>	<b>2,364</b>
Akutan	4A	713	117	1,027	76	1,052
Nikolski	4A	39	27	18	17	15
Unalaska	4A	4,283	397	4,376	355	4,689
Census area balances <sup>d</sup>	4A			178		178
<b>Subtotal, Area 4A</b>		<b>5,035</b>	<b>541</b>	<b>5,599</b>	<b>448</b>	<b>5,934</b>
Adak	4B	316	118	326	46	247
Atka	4B	92	84	61	58	70
Census area balances <sup>d</sup>	4B					
<b>Subtotal, Area 4B</b>		<b>408</b>	<b>202</b>	<b>387</b>	<b>104</b>	<b>317</b>
St George Island	4C	152	140	102	92	92
St Paul Island	4C	532	460	479	417	436
Census area balances <sup>d</sup>	4C					
<b>Subtotal, Area 4C</b>		<b>684</b>	<b>600</b>	<b>581</b>	<b>509</b>	<b>528</b>
Gambell	4D	649	622	681	654	713
Savoonga	4D	643	614	671	637	718
Diomedes	4D	146	137	115	110	111
Census area balances <sup>d</sup>	4D					
<b>Subtotal, Area 4D</b>		<b>1,438</b>	<b>1,373</b>	<b>1,467</b>	<b>1,401</b>	<b>1,542</b>
Alakanuk	4E	652	638	677	660	730
Aleknagik	4E	221	187	219	185	197
Brevig Mission	4E	276	254	388	366	411
Bethel	4E	5,471	3,719	6,080	4,334	6,241
Chefornak	4E	394	386	418	403	420
Chevak	4E	765	734	938	912	989
Clark's Point	4E	75	69	62	55	48
Council ANVSA <sup>c</sup>	4E	0	0	0	0	0
Dillingham	4E	2,466	1,503	2,329	1,549	2,431
Eek	4E	280	271	296	289	349
Egegik	4E	116	89	109	51	106
Elim	4E	313	297	330	305	350

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Table 1.–Page 3 of 4.

Community <sup>a</sup>	Regulatory area	Population				
		2000		2010		2014
		Total	Alaska Native	Total	Alaska Native	Total
Emmonak	4E	767	720	762	737	841
Golovin	4E	144	133	156	148	171
Goodnews Bay	4E	230	216	243	232	259
Hooper Bay	4E	1,014	971	1,093	1,070	1,178
King Salmon	4E	442	133	374	132	335
Kipnuk	4E	644	631	639	626	643
Kongiganak	4E	359	349	439	430	501
Kotlik	4E	591	568	577	563	653
Koyuk	4E	297	280	332	319	321
Kwigillingok	4E	338	331	321	310	364
Levelock	4E	122	116	69	62	80
Manokotak	4E	399	378	442	425	500
Mekoryuk	4E	210	203	191	185	210
Naknek	4E	678	319	544	283	523
Napakiak	4E	353	341	354	344	387
Napaskiak	4E	390	383	405	393	451
Newtok	4E	321	311	354	343	380
Nightmute	4E	208	197	280	266	274
Nome	4E	3,505	2,057	3,598	2,348	3,721
Oscarville	4E	61	61	70	67	53
Pilot Point	4E	100	86	68	57	78
Platinum	4E	41	38	61	57	60
Port Heiden	4E	119	93	102	87	114
Quinhagak	4E	555	540	669	650	724
Scammon Bay	4E	465	453	474	472	528
Saint Michael	4E	368	343	401	379	418
Shaktoolik	4E	230	218	251	242	282
Nunam Iqua	4E	164	154	187	174	181
Shishmaref	4E	562	531	563	540	580
Solomon ANVSA	4E	4	3	0	0	0
South Naknek	4E	137	115	79	66	84
Stebbins	4E	547	518	556	530	608
Teller	4E	268	248	229	220	256
Togiak	4E	809	750	817	767	876
Toksook Bay	4E	532	519	590	555	623
Tuntutuliak	4E	370	366	408	396	437
Tununak	4E	325	315	327	314	384

- continued -

Table 1.–Page 4 of 4.

Community <sup>a</sup>	Regulatory area	Population				
		2000		2010		2014
		Total	Alaska Native	Total	Alaska Native	Total
Twin Hills	4E	69	65	74	72	87
Ugashik	4E	11	9	12	9	15
Unalakleet	4E	747	655	688	574	744
Wales	4E	152	137	145	136	146
White Mountain	4E	203	175	190	167	203
Census area balances <sup>d</sup>	4E			398		379
<b>Subtotal, Area 4E</b>		<b>28,880</b>	<b>23,176</b>	<b>30,378</b>	<b>24,856</b>	<b>31,924</b>
<b>Grand Total</b>		<b>82,707</b>	<b>38,990</b>	<b>84,353</b>	<b>40,053</b>	<b>86,952</b>

*Sources* U.S. Census Bureau 2001; Alaska Department of Labor and Workforce Development 2011, 2015.

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 chonology, 2014.*

Date	Event/Action
October 1, 2014	NOAA Grant Award No. NA14NMF4370115 between NMFS and ADF&G in effect to support the research for study year 2014
January 9, 2015	First mailing of survey forms
March 10, 2015	Second mailing of survey forms
April 17, 2015	Third mailing of survey forms
April through June, 2015	Administration of surveys in Hydaburg, Sitka, Toksook Bay, Tununak, Sand Point, and King Cove.
April 14, 2015	Submission of semi-annual report on project progress to NMFS
October 28, 2015	Submission of semi-annual report on project progress to NMFS
December 7, 2015	Release of public review draft of final report
December 9, 2015	Presentation of study findings, NPFMC, Anchorage
January 15, 2016	Completion of revised, final report; distribution of findings summary
January 27, 2016	Presentation of 2014 study findings at IPHC annual meeting, Juneau, AK

Table 3.—Sample achievement, 2014.

Tribal Name	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	Total potential fishers	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Angoon Community Association	2C	77	16	11	50	5	0	46	6	0	77	27	1	28	36.4%	11
Central Council Tlingit and Haida Indian Tribes	2C	460	154	65	249	29	11	203	20	10	460	203	2	205	44.6%	86
Chilkat Indian Village	2C	11	5	0	6	2	0	4	1	0	11	8	0	8	72.7%	0
Chilkoot Indian Association	2C	44	23	6	18	2	0	16	1	1	44	26	0	26	59.1%	7
Craig Community Association	2C	43	17	5	18	3	3	14	2	0	43	22	1	23	53.5%	8
Douglas Indian Association	2C	7	3	0	4	0	0	4	0	1	7	3	0	3	42.9%	1
Hoonah Indian Association	2C	114	44	6	68	5	4	56	6	2	114	55	0	55	48.2%	12
Hydaburg Cooperative Association	2C	74	11	1	62	6	3	55	1	0	74	18	27	45	60.8%	4
Ketchikan Indian Corporation	2C	480	150	66	280	24	7	238	28	5	480	202	2	204	42.5%	78
Klawock Cooperative Association	2C	66	20	8	38	4	0	35	6	0	66	30	0	30	45.5%	8
Metlakatla Indian Community, Annette Island Reserve	2C	148	43	1	105	19	0	91	10	1	148	72	1	73	49.3%	2
Organized Village of Kake	2C	83	46	3	39	6	0	30	1	0	83	53	0	53	63.9%	3
Organized Village of Kasan	2C	6	2	0	3	1	1	0	0	0	6	3	0	3	50.0%	1
Organized Village of Saxman	2C	25	2	2	20	1	0	18	4	0	25	7	1	8	32.0%	2
Petersburg Indian Association	2C	61	30	3	28	11	2	14	2	0	61	43	0	43	70.5%	5
Sitka Tribe of Alaska	2C	251	75	50	134	20	2	101	8	1	251	103	38	141	56.2%	53
Skagway Village Wrangell Cooperative Association	2C	79	37	8	37	12	0	25	3	1	79	52	0	52	65.8%	9
<b>Subtotal, Area 2C</b>		<b>2,031</b>	<b>680</b>	<b>235</b>	<b>1,159</b>	<b>150</b>	<b>33</b>	<b>950</b>	<b>99</b>	<b>22</b>	<b>2,031</b>	<b>929</b>	<b>73</b>	<b>1,002</b>	<b>49.3%</b>	<b>290</b>
Kenaitze Indian Tribe	3A	115	40	4	72	13	1	59	8	2	115	61	1	62	53.9%	7
Lesnoi Village (Woody Island)	3A	34	17	4	13	1	2	9	1	0	34	19	0	19	55.9%	6
Native Village of Afognak	3A	16	9	1	6	2	0	5	0	0	16	11	0	11	68.8%	1
Native Village of Akhtok	3A	21	10	1	10	0	0	10	0	1	21	10	0	10	47.6%	2
Native Village of Chenega	3A	19	7	0	10	3	0	9	1	0	19	11	1	12	63.2%	1
Native Village of Eyak	3A	58	23	5	32	6	3	22	1	1	58	30	0	30	51.7%	9
Native Village of Kariak	3A	8	4	1	6	0	0	1	2	0	8	4	0	4	50.0%	2
Native Village of Larsen Bay	3A	38	12	2	26	2	1	23	1	2	38	15	0	15	39.5%	3

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Table 3.—Page 2 of 9

Tribal Name	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	Total potential fishers	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Native Village of Nanawalek	3A	73	16	3	57	11	1	45	0	1	73	27	0	27	37.0%	4
Native Village of Ouzinkie	3A	26	9	7	10	0	0	10	1	0	26	10	0	10	38.5%	7
Native Village of Port Graham	3A	36	11	1	22	2	0	21	8	1	36	21	1	22	61.1%	2
Native Village of Port Lions	3A	32	18	1	14	6	1	8	0	0	32	24	0	24	75.0%	2
Native Village of Tatitlek	3A	22	9	1	11	0	2	9	0	1	22	9	4	13	59.1%	2
Ninilchik Village	3A	56	24	5	28	4	0	25	0	2	56	28	0	28	50.0%	6
Seldovia Village Tribe	3A	57	25	5	31	9	0	18	0	0	57	34	0	34	59.6%	5
Sun/Aq Tribe of Kodiak (Formerly Shoomaq)	3A	102	40	9	59	8	1	48	7	0	102	55	0	55	53.9%	10
Village of Kamatak	3A	17	0	10	6	0	0	6	0	0	17	0	0	0	0.0%	10
Village of Old Harbor	3A	35	17	0	19	4	0	15	0	0	35	21	0	21	60.0%	0
Village of Salamattof	3A	24	12	1	13	6	0	9	0	1	24	18	0	18	75.0%	2
Yakutat Thingit Tribe	3A	42	18	2	26	3	0	21	3	0	42	24	0	24	57.1%	2
<b>Subtotal, Area 3A</b>		<b>831</b>	<b>321</b>	<b>64</b>	<b>471</b>	<b>80</b>	<b>13</b>	<b>374</b>	<b>31</b>	<b>12</b>	<b>831</b>	<b>432</b>	<b>7</b>	<b>439</b>	<b>52.8%</b>	<b>83</b>
Agdaagux Tribe of King Cove	3B	33	17	1	21	4	0	11	1	0	43	22	17	39	90.7%	1
Chignik Lake Village	3B	13	2	3	10	1	0	7	0	1	13	3	0	3	23.1%	4
Ivanoff Bay Village	3B										5					
Native Village of Belkofski	3B	5	0	0	5	0	0	5	0	1	6	0	3	3	50.0%	1
Native Village of Chignik	3B										2					
Native Village of Chignik Lagoon	3B	13	8	0	5	0	0	5	1	0	13	9	0	9	69.2%	0
Native Village of False Pass	3B										2					
Native Village of Nelson Lagoon	3B										2					
Native Village of Perryville	3B	7	4	2	2	0	0	1	1	0	7	5	0	5	71.4%	2
Native Village of Unga	3B	2	2	0	0	0	0	0	0	0	7	2	5	7	100.0%	0
Pauloff Harbor Village	3B	69	6	7	56	3	0	53	3	3	70	12	38	50	71.4%	10
Qagan, Toyagungin Tribe of Sand Point Village	3B	42	17	7	16	2	1	12	3	0	77	22	46	68	88.3%	8
<b>Subtotal, Area 3B</b>		<b>194</b>	<b>62</b>	<b>20</b>	<b>121</b>	<b>11</b>	<b>1</b>	<b>97</b>	<b>9</b>	<b>6</b>	<b>247</b>	<b>82</b>	<b>110</b>	<b>192</b>	<b>77.7%</b>	<b>27</b>
Native Village of Auktan	4A	9	4	0	5	1	0	4	0	0	9	5	0	5	55.6%	0
Qawalingin Tribe of Unalaska	4A	23	6	2	15	3	0	12	0	0	23	9	0	9	39.1%	2
<b>Subtotal, Area 4A</b>		<b>32</b>	<b>10</b>	<b>2</b>	<b>20</b>	<b>4</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>14</b>	<b>0</b>	<b>14</b>	<b>43.8%</b>	<b>2</b>
Native Village of Aitka	4B										5					
<b>Subtotal, Area 4B</b>											5					
Pribilof Islands Aleut Community of St George	4C										4					

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Table 3.—Page 3 of 9

Tribal Name	First Mailing			Second Mailing			Third Mailing			Totals					
	Regulatory area	Surveys mailed	Surveys returned	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Total potential fishers	Returned by mail	Returned through staff	Response rate	Response rate	Undeliverable
Pribilof Islands Aleut Community of St Paul	4C	27	2	1	24	5	0	19	0	3	7	0	7	25.9%	4
<b>Subtotal, Area 4C</b>		<b>31</b>	<b>3</b>	<b>1</b>	<b>27</b>	<b>5</b>	<b>0</b>	<b>22</b>	<b>0</b>	<b>3</b>	<b>8</b>	<b>0</b>	<b>8</b>	<b>25.8%</b>	<b>4</b>
Native Village of Diomedes (Inalik)	4D	6	4	0	2	1	0	1	0	0	5	0	5	83.3%	0
Native Village of Savoonga	4E	7	5	0	2	1	0	1	0	0	6	0	6	85.7%	0
<b>Subtotal, Area 4D</b>															
Chevak Native Village (Kashunamut)	4E										1				
Chinik Eskimo Community	4E										1				
Egegik Village	4E										4				
King Island Native Community	4E										2				
King Salmon Tribal Council	4E										1				
Manokotak Village	4E										1				
Naknek Native Village	4E										4				
Native Village of Aleknagik	4E										3				
Native Village of Council	4E										4				
Native Village of Dillingham (Curyung)	4E	7	2	0	5	2	0	5	0	0	4	0	4	57.1%	0
Native Village of Eek	4E	8	4	0	4	2	1	2	0	0	6	0	6	75.0%	1
Native Village of Hooper Bay	4E										1				
Native Village of Kanakanak	4E										1				
Native Village Of Kipnuk	4E										4				
Native Village of Kongiganak	4E										5				
Native Village of Koyuk	4E										1				
Native Village of Kwigillingok	4E										1				
Native Village of Kwinhagak	4E										5				
Native Village of Mekoryuk	4E										4				
Native Village of Nighnutte	4E										1				
Native Village of Scammon Bay	4E										2				
Native Village of Shaktoolik	4E										1				
Native Village of Toksook Bay	4E	9	6	0	2	0	0	2	0	0	6	79	85	74.6%	0

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Table 3.-Page 4 of 9

Tribal Name	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	Total potential fishers	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Native Village of Tununak	4E	0	0	0	0	0	0	0	0	0	70	0	53	53	75.7%	0
Native Village of Unalakleet	4E										1					
Newtok Village	4E										1					
Nome Eskimo Community	4E	8	1	1	6	0	0	6	1	0	8	2	0	2	25.0%	1
Onuksararmiut Native Village	4E	8	6	0	2	1	0	2	0	0	8	7	0	7	87.5%	0
Platinum Traditional Village	4E										1					
South Naknek Village	4E										1					
Traditional Village of Togiak	4E										1					
Village of Alakanuk	4E										1					
Village of Cheformak	4E	4	0	1	3	0	0	3	0	0	6	0	2	2	33.3%	1
Village of Clark's Point	4E	97	32	5	59	13	2	48	2	1	276	47	136	183	66.3%	8
<b>Subtotal, Area 4E</b>		<b>3,228</b>	<b>1,115</b>	<b>328</b>	<b>1,861</b>	<b>264</b>	<b>49</b>	<b>1,510</b>	<b>142</b>	<b>44</b>	<b>3,460</b>	<b>1,521</b>	<b>326</b>	<b>1,847</b>	<b>53.4%</b>	<b>415</b>

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Regulatory area	First Mailing				Second Mailing				Third Mailing				Totals					
	Surveys mailed	Surveys returned	Surveys returned undeliverable	Response rate	Surveys mailed	Surveys returned	Surveys returned undeliverable	Response rate	Surveys mailed	Surveys returned	Surveys returned undeliverable	Response rate	Total potential fishers	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Rural Community	17	5	0	29.4%	7	2	0	28.6%	6	1	0	16.7%	17	8	0	8	47.1%	5
Angoon	46	27	0	58.7%	21	9	0	42.9%	19	2	0	10.5%	46	8	0	38	82.6%	0
Coffman Cove	282	185	18	65.6%	96	30	4	31.3%	60	8	2	13.3%	282	223	1	224	79.4%	23
Craig	30	17	0	56.7%	16	8	0	50.0%	10	0	0	0.0%	30	25	0	25	83.3%	0
Edna Bay	9	7	2	77.8%	0	0	0	0.0%	0	0	0	0.0%	9	7	0	7	77.8%	2
Elfin Cove	62	48	2	77.3%	13	2	1	15.4%	8	2	0	25.0%	62	52	1	53	85.5%	3
Gustavus	400	264	15	66.0%	150	33	5	22.0%	98	23	5	23.5%	400	320	2	322	80.5%	20
Haines	30	14	4	46.7%	13	4	1	30.8%	8	3	0	37.5%	30	21	0	21	70.0%	5
Hollis	82	54	6	65.9%	23	9	0	41.3%	13	3	0	23.1%	82	66	1	67	81.7%	6
Hoonah	8	3	0	37.5%	5	1	0	12.5%	4	1	0	25.0%	8	5	1	6	75.0%	0
Hydaburg	27	14	0	51.9%	18	6	0	22.2%	10	3	0	30.0%	27	23	0	23	85.2%	0
Hyder	11	5	0	45.5%	8	0	0	0.0%	7	1	0	14.3%	11	6	0	6	54.5%	0
Juneau	41	24	3	58.5%	14	4	0	28.6%	11	3	0	27.3%	41	31	0	31	75.6%	3
Kake	8	4	1	50.0%	2	1	0	50.0%	1	0	0	0.0%	8	5	0	5	62.5%	1
Kasaan	28	6	4	21.4%	18	7	0	38.9%	11	1	0	9.1%	28	14	0	14	50.0%	4
Ketchikan	128	69	12	53.9%	51	11	0	21.4%	38	6	1	15.8%	128	86	2	88	68.8%	13
Klawock													1					
Klukwan	20	6	0	30.0%	13	4	0	30.8%	10	1	0	10.0%	20	11	0	11	55.0%	0
Metlakatla	9	7	0	77.8%	4	1	0	25.0%	2	0	0	0.0%	9	8	0	8	88.9%	0
Meyers Chuck	44	23	6	52.3%	20	3	2	15.0%	11	1	1	9.1%	44	27	0	27	61.4%	8
Naukatu Bay	32	14	1	43.8%	18	7	0	39.0%	12	2	0	16.7%	32	23	0	23	71.9%	2
Pelican	781	511	23	65.6%	302	69	6	22.8%	191	23	6	11.5%	781	604	1	604	77.3%	33
Petersburg	11	7	1	63.6%	5	0	0	0.0%	3	1	0	33.3%	11	8	0	8	72.7%	1
Point Baker	19	12	1	63.2%	7	2	0	28.6%	7	3	0	42.9%	19	17	1	18	94.7%	1
Port Alexander	10	5	1	50.0%	4	2	0	50.0%	2	0	0	0.0%	10	7	0	7	70.0%	1
Port Protection													3					
Saxman	1,285	628	142	49.3%	553	67	19	12.1%	415	32	11	7.7%	1,285	727	163	890	69.3%	166
Sitka	64	44	3	68.8%	24	5	0	37.5%	16	6	0	37.5%	64	55	0	55	85.9%	3
Skagway	48	34	1	70.8%	14	6	0	42.9%	7	1	0	14.3%	48	41	0	41	85.4%	1
Tenakee Springs	119	72	7	60.5%	46	14	0	30.4%	29	7	1	24.1%	119	93	1	94	79.0%	8
Thorne Bay													4					
Ward Cove	12	8	1	66.7%	5	0	0	0.0%	3	0	0	0.0%	12	8	0	8	66.7%	1
Whale Pass	404	257	9	63.6%	168	29	1	17.2%	112	13	6	11.6%	404	299	1	300	74.3%	16
Wrangell	31	15	2	48.4%	13	2	1	15.4%	10	0	0	0.0%	31	17	2	19	61.3%	3
<b>Subtotal, Area 2C</b>	<b>4,075</b>	<b>2,376</b>	<b>269</b>	<b>58.3%</b>	<b>1,644</b>	<b>339</b>	<b>36</b>	<b>20.6%</b>	<b>1,127</b>	<b>147</b>	<b>33</b>	<b>13.0%</b>	<b>4,075</b>	<b>2,862</b>	<b>175</b>	<b>3,037</b>	<b>74.5%</b>	<b>327</b>
Akhiok	31	15	2	48.4%	13	2	1	15.4%	10	0	0	0.0%	31	17	2	19	61.3%	3
Anchorage													1					
Chenega Bay	7	3	1	42.9%	3	2	0	66.7%	1	1	0	100.0%	7	6	0	6	85.7%	1
Chiniak	9	7	0	77.8%	2	0	0	0.0%	2	1	0	50.0%	9	8	0	8	88.9%	0
Cordova	397	228	10	57.4%	171	53	6	30.9%	102	10	6	9.8%	397	291	2	293	73.8%	26
Homer													3					
Kodiak	1,251	581	125	46.4%	606	138	32	22.8%	416	60	26	14.4%	1,251	779	7	786	62.8%	175
Larsen Bay													4					
Nanwalek													3					
Old Harbor													5					
Ouzunkie	7	4	1	57.1%	4	1	0	25.0%	3	0	0	0.0%	7	5	0	5	71.4%	1
Port Graham	6	5	0	83.3%	1	1	0	100.0%	1	0	0	0.0%	6	6	0	6	100.0%	0
Port Lions	16	6	1	37.5%	9	1	0	11.1%	8	1	0	12.5%	16	8	0	8	50.0%	1
Seldovia	120	68	11	56.7%	47	13	0	27.7%	31	4	0	12.9%	120	85	2	87	72.5%	11
Tatitlek	10	3	0	30.0%	9	0	1	0.0%	6	1	1	16.7%	10	4	1	5	50.0%	2

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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	Total potential fishers	Returned through staff	Response	Response rate	Undeliverable
Rural Community														
Valdez														
3A	58	38	0	28	4	0	20	0	0	1	58	42	42	0
3A	1,929	968	152	901	216	44	606	79	34	1,929	1,263	1,278	66.3%	222
Subtotal, Area 3A	23	17	2	6	1	0	3	0	1	23	18	18	78.3%	3
Cold Bay														
3B	15	13	0	3	1	0	2	0	0	3	19	14	100.0%	0
3B	2	1	0	1	0	0	1	0	0	6	1	5	100.0%	0
3B	43	33	2	11	2	0	7	0	1	51	35	45	88.2%	3
Subtotal, Area 3B														
Aktutan														
4A	28	2	1	27	6	2	18	3	0	28	11	11	39.3%	2
4A	105	53	3	56	13	6	36	6	0	105	72	72	68.6%	8
Subtotal, Area 4A	134	56	4	83	19	8	54	9	0	134	84	84	62.7%	10
Adak														
4B														
Subtotal, Area 4B														
St Paul Island														
4C														
Subtotal, Area 4C														
Savoonga														
4D														
Subtotal, Area 4D														
Alakanuk														
4E														
Bethel														
4E														
Chevak														
4E	13	7	2	7	1	0	3	0	0	13	8	8	61.5%	2
Dillingham														
4E														
Egegik														
4E														
King Salmon														
4E														
Koyuk														
4E														
Manokotak														
4E	15	6	0	10	0	0	9	2	0	15	8	8	53.3%	0
Mekoryuk														
4E														
Naknek														
4E	13	8	2	4	1	0	3	1	0	13	10	10	76.9%	2
Nome														
4E														
Pilot Point														
4E														
Port Heiden														
4E	5	1	0	3	0	0	3	0	0	10	1	7	80.0%	0
Tununak														
4E														
Unalakleet														
4E	60	28	6	30	4	0	24	4	0	65	36	43	66.2%	6
Subtotal, Area 4E	6,246	3,463	434	2,671	580	88	1,820	239	68	6,259	4,282	4,489	71.7%	569
Rural community subtotal	9,474	4,578	762	4,532	844	137	3,330	381	112	9,719	5,803	6,336	65.2%	984
Total (tribal and rural)														

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City of residence	State of residence	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	Total potential fishers	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Adak	AK	6	2	0	4	0	0	4	0	0	6	2	0	2	33.3%	0
Akhik	AK	20	10	1	8	0	0	8	0	0	20	10	1	11	55.0%	1
Akutan	AK										5					
Alakanuk	AK										1					
Anchor Point	AK	12	5	0	7	4	0	3	0	0	12	9	0	9	75.0%	0
Anchorage	AK	157	72	24	69	8	4	50	6	5	157	86	0	86	54.8%	33
Angoon	AK	105	21	20	64	7	0	59	8	0	105	36	1	37	35.2%	20
Auke Bay	AK										4					
Barrow	AK										2					
Bethel	AK	9	6	0	2	1	0	1	0	0	9	7	0	7	77.8%	0
Big Lake	AK										1					
Chefomak	AK										3					
Chenequa Bay	AK	10	4	0	6	2	0	4	0	0	10	6	1	7	70.0%	0
Chevak	AK										1					
Chignik	AK										3					
Chignik Lagoon	AK	7	4	0	3	0	0	3	0	0	7	4	0	4	57.1%	0
Chignik Lake	AK										4					
Chumak	AK	14	8	1	5	1	0	4	1	0	14	10	0	10	71.4%	1
Chugiak	AK										4					
Clarks Point	AK										2					
Coffman Cove	AK	45	26	0	21	9	0	18	1	0	45	36	0	36	80.0%	0
Cold Bay	AK	28	21	1	7	1	0	4	1	0	28	23	0	23	82.1%	2
Condova	AK	450	247	16	200	59	11	124	13	6	450	319	2	321	71.3%	33
Craig	AK	393	234	29	145	46	2	102	19	2	393	299	0	299	76.1%	33
Dillingham	AK	17	8	1	11	3	0	7	0	1	17	11	0	11	64.7%	2
Douglas	AK	18	4	3	11	1	0	10	0	2	18	5	0	5	27.8%	5
Dutch Harbor	AK	66	20	3	49	10	9	28	5	0	66	35	1	36	54.5%	10
Eagle River	AK	10	5	0	5	0	0	5	0	2	10	5	0	5	50.0%	2
Edna Bay	AK	25	14	0	13	5	0	11	0	0	25	19	0	19	76.0%	0
Eek	AK	6	4	0	2	1	0	2	0	0	6	5	0	5	83.3%	0
Egegik	AK										1					
Elfin Cove	AK	10	7	1	3	1	0	1	0	0	10	8	0	8	80.0%	1
Fairbanks	AK										5					
False Pass	AK										1					
Fritz Creek	AK										1					
Girdwood	AK										1					
Glenallen	AK										1					
Gustavus	AK	60	48	0	13	2	1	8	2	0	60	52	1	53	88.3%	1
Haines	AK	449	284	18	180	36	3	121	26	5	449	346	2	348	77.5%	25
Hollis	AK										3					
Homer	AK	37	16	3	22	0	0	18	1	2	37	17	1	18	48.6%	5
Hoonah	AK	188	98	12	83	15	4	61	7	0	188	120	1	121	64.4%	16
Hydaburg	AK	78	10	0	65	8	3	56	1	0	78	19	29	48	61.5%	3
Hyder	AK	27	14	0	18	6	0	10	3	0	27	23	0	23	85.2%	0
Juneau	AK	325	119	41	172	13	7	144	13	8	325	145	2	147	45.2%	56
Kake	AK	112	64	3	49	11	0	37	5	0	112	80	0	80	71.4%	3
Karluk	AK	6	4	0	5	0	0	2	0	0	6	4	0	4	66.7%	0
Kasaan	AK	11	3	0	5	0	3	1	0	0	11	3	0	3	27.3%	3
Kasilof	AK	11	4	0	5	0	1	4	1	0	11	5	0	5	45.5%	1

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City of residence	State of residence	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	Total potential fishers	Returned by mail	Returned through staff	Response rate	Undeliverable	
Kenai	AK	88	29	5	55	14	0	43	5	1	88	48	1	49	55.7%	6
Ketchikan	AK	546	165	67	331	40	8	268	33	5	546	238	3	241	44.1%	80
King Cove	AK	49	27	0	27	5	0	18	0	1	63	32	26	58	92.1%	1
Kipnuk	AK										3					
Klawock	AK	192	88	19	89	15	1	69	10	1	192	113	2	115	59.9%	21
Kodiak	AK	1375	624	134	684	147	35	478	68	26	1375	839	7	846	61.5%	187
Kongiganak	AK										4					
Kwigillingok	AK										1					
Larsen Bay	AK	36	12	2	23	2	1	21	1	1	36	15	0	15	41.7%	2
Manokotak	AK										3					
Mekoryuk	AK	18	8	0	11	0	0	10	2	0	18	10	0	10	55.6%	0
Metlakatla	AK	163	43	8	111	21	0	97	10	1	163	74	1	75	46.0%	9
Meyers Chuck	AK	9	7	0	4	1	0	2	0	0	9	8	0	8	88.9%	0
Naknek	AK	6	3	0	3	0	1	3	0	0	6	3	0	3	50.0%	1
Nanwalek	AK	75	18	3	58	11	1	44	0	1	75	29	1	30	40.0%	4
Naukatik Bay	AK	24	13	0	14	2	2	8	0	2	24	15	0	15	62.5%	2
Nelson Lagoon	AK										1					
Nikiski	AK	7	1	2	4	1	0	3	0	0	7	2	0	2	28.6%	2
Ninilchik	AK	22	9	1	12	2	0	10	0	0	22	11	0	11	50.0%	1
Nome	AK	16	10	2	5	1	0	4	1	0	16	12	0	12	75.0%	2
North Pole	AK										2					
Old Harbor	AK	35	15	0	20	5	0	18	0	0	35	20	0	20	57.1%	0
Ouzinkie	AK	24	11	5	10	1	0	9	1	0	24	13	0	13	54.2%	5
Palmer	AK	8	4	0	4	2	0	2	0	0	8	6	0	6	75.0%	0
Pelican	AK	37	18	0	21	8	2	12	3	0	37	29	0	29	78.4%	2
Perryville	AK										5					
Petersburg	AK	863	554	26	339	80	8	214	25	7	863	659	0	659	76.4%	39
Point Baker	AK	14	9	0	7	0	0	5	1	0	14	10	0	10	71.4%	0
Port Alexander	AK	20	11	3	8	2	0	8	3	0	20	16	0	16	80.0%	3
Port Graham	AK	34	11	0	21	3	0	20	8	0	34	22	1	23	67.6%	0
Port Heiden	AK										1					
Port Lions	AK	39	18	1	21	7	0	15	1	0	39	26	0	26	66.7%	1
Port Protection	AK										1					
Quinhagak	AK										5					
Saint George Island	AK										2					
Saint Paul Island	AK	27	3	0	24	5	0	19	0	3	27	8	0	8	29.6%	3
Sand Point	AK	92	22	4	64	5	0	58	3	3	139	30	92	122	87.8%	7
Savoonga	AK	6	4	0	2	0	0	2	0	0	6	4	0	4	66.7%	0
Saxman	AK										3					
Seldovia	AK	140	75	16	56	17	0	35	4	0	140	96	2	98	70.0%	16
Seward	AK	10	3	2	5	1	0	4	2	0	10	6	0	6	60.0%	2
Sitka	AK	1530	691	206	674	88	22	504	39	12	1530	818	204	1022	66.8%	234
Skagway	AK	68	48	3	24	5	0	16	6	0	68	59	0	59	86.8%	3
Soldotna	AK	43	24	1	21	4	0	19	2	1	43	30	0	30	69.8%	2
Sterling	AK										5					
Tatitlek	AK	19	6	0	11	0	1	9	1	2	19	7	5	12	63.2%	2
Teller	AK										1					
Tenakee Springs	AK	49	35	2	13	6	0	6	0	0	49	41	0	41	83.7%	2
Thome Bay	AK	112	71	7	41	12	0	26	7	0	112	90	1	91	81.3%	7

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City of residence	State of residence	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	Total potential fishers	Returned by mail	Returned through staff	Response rate	Response rate	Undeliverable
Togiak	AK	7	5	0	1	0	0	1	0	0	115	5	82	87	75.7%	0
Toksook Bay	AK															
Trapper Creek	AK	5	1	0	3	0	0	3	0	0	81	1	61	62	76.5%	0
Tununak	AK															
Unalakleet	AK	93	44	4	48	13	0	36	4	0	93	61	0	61	65.6%	4
Unalaska	AK	30	14	3	17	5	2	11	0	1	30	19	0	19	63.3%	5
Valdez	AK	43	20	4	25	5	0	17	0	0	43	25	0	25	58.1%	4
Ward Cove	AK	35	2	16	17	3	0	15	1	0	35	6	1	7	20.0%	16
Wasilla	AK															
Whale Pass	AK															
Willow	AK															
Wrangell	AK	495	297	16	215	42	1	147	16	8	495	355	1	356	71.9%	25
Yakutat	AK	101	57	2	55	6	0	42	3	0	101	66	0	66	65.3%	2
<b>Subtotal, Alaska</b>		<b>9,406</b>	<b>4,545</b>	<b>753</b>	<b>4,505</b>	<b>841</b>	<b>135</b>	<b>3,308</b>	<b>379</b>	<b>111</b>	<b>9,651</b>	<b>5,765</b>	<b>533</b>	<b>6,298</b>	<b>65.3%</b>	<b>972</b>
<b>Subtotal, non-Alaska</b>		<b>68</b>	<b>33</b>	<b>9</b>	<b>27</b>	<b>3</b>	<b>2</b>	<b>22</b>	<b>2</b>	<b>1</b>	<b>68</b>	<b>38</b>	<b>0</b>	<b>38</b>	<b>55.9%</b>	<b>12</b>
<b>Total</b>		<b>9,474</b>	<b>4,578</b>	<b>762</b>	<b>4,532</b>	<b>844</b>	<b>137</b>	<b>3,330</b>	<b>381</b>	<b>112</b>	<b>9,719</b>	<b>5,803</b>	<b>533</b>	<b>6,336</b>	<b>65.2%</b>	<b>984</b>

Note: To protect confidentiality, data for tribes and communities with 5 or fewer SHARC's issued are not reported in this table. Subtotals include all tribes and communities.

Table 4.—Estimated subsistence harvests of halibut by SHARC type and regulatory area, 2014.

SHARC type <sup>a</sup>	Regulatory Area	Return Rate			Subsistence Fished Halibut			Subsistence Halibut Harvest			Sport Fished Halibut			Sport Halibut Harvest		
		SHARCs Issued <sup>b</sup>	Surveys Returned	Percent	Estimated Number Respondents	Percent of SHARCs	Estimated Number Fish	Estimated Number Pounds <sup>d</sup>	Estimated Number Respondents	Percent of SHARCs	Estimated Number Fish	Estimated Number Pounds <sup>d</sup>	Estimated Number Respondents	Percent of SHARCs	Estimated Number Fish	Estimated Number Pounds <sup>d</sup>
Tribal <sup>c</sup>	2C	2,031	1,002	49.3%	657	32.4%	6,785	139,747	359	17.7%	1,431	27,190				
Tribal	3A	831	439	52.8%	345	41.5%	3,381	60,913	123	14.8%	368	6,441				
Tribal	3B	247	192	77.7%	111	44.7%	587	9,041	16	6.6%	44	743				
Tribal	4A	32	14	43.8%	8	24.0%	10	134	4	13.6%	2	47				
Tribal	4B	5	3	60.0%	3	66.7%	17	350	2	33.3%	2	25				
Tribal	4C	31	8	25.8%	15	49.8%	494	4,325	0	0.0%	0	0				
Tribal	4D	7	6	85.7%	3	48.6%	32	579	1	17.1%	6	108				
Tribal	4E	276	183	66.3%	217	78.5%	4,791	59,862	9	3.3%	53	938				
<b>Subtotal, tribal</b>		<b>3,460</b>	<b>1,847</b>	<b>53.4%</b>	<b>1,359</b>	<b>39.3%</b>	<b>16,096</b>	<b>274,952</b>	<b>514</b>	<b>14.9%</b>	<b>1,906</b>	<b>35,492</b>				
Rural <sup>c</sup>	2C	4,075	3,037	74.5%	2,006	49.2%	13,954	288,421	1,060	26.0%	4,095	71,395				
Rural	3A	1,929	1,278	66.3%	1,016	52.7%	9,216	170,435	612	31.7%	2,371	41,219				
Rural	3B	51	45	88.2%	32	63.4%	494	9,296	8	15.9%	23	394				
Rural	4A	134	84	62.7%	61	45.7%	349	7,062	31	23.1%	130	2,091				
Rural	4B	2	2	100.0%	1	50.0%	2	38	1	50.0%	5	53				
Rural	4C	2	0	0.0%	0	0.0%	0	0	0	0.0%	0	0				
Rural	4D	1	0	0.0%	0	0.0%	0	0	0	0.0%	0	0				
Rural	4E	65	43	66.2%	31	47.0%	587	10,266	2	3.1%	13	74				
<b>Subtotal, rural</b>		<b>6,259</b>	<b>4,489</b>	<b>71.7%</b>	<b>3,147</b>	<b>50.3%</b>	<b>24,602</b>	<b>485,517</b>	<b>1,714</b>	<b>27.4%</b>	<b>6,637</b>	<b>115,224</b>				
All <sup>c</sup>	2C	6,106	4,039	66.1%	2,663	43.6%	20,739	428,168	1,419	23.2%	5,526	98,585				
All	3A	2,760	1,717	62.2%	1,361	49.3%	12,597	231,348	735	26.6%	2,740	47,660				
All	3B	298	237	79.5%	143	47.9%	1,081	18,338	24	8.2%	67	1,138				
All	4A	166	98	59.0%	69	41.5%	359	7,196	35	21.3%	132	2,138				
All	4B	7	5	71.4%	4	61.9%	19	388	3	38.1%	7	78				
All	4C	33	8	24.2%	15	46.8%	494	4,325	0	0.0%	0	0				
All	4D	8	6	75.0%	3	42.5%	32	579	1	15.0%	6	108				
All	4E	341	226	66.3%	247	72.5%	5,378	70,128	11	3.2%	66	1,011				
<b>Total</b>		<b>9,719</b>	<b>6,336</b>	<b>65.2%</b>	<b>4,506</b>	<b>46.4%</b>	<b>40,698</b>	<b>760,469</b>	<b>2,228</b>	<b>22.9%</b>	<b>8,543</b>	<b>150,717</b>				

Source: ADF&G Division of Subsistence SHARC survey, 2015

a. Subsistence Halibut Registration Certificate (SHARC)

b. Includes all individuals who held SHARCs for at least a portion of 2014 plus potential subsistence fishers who did not hold SHARCs in selected communities.

c. "Tribal" includes individuals who obtained SHARCs as members of an eligible tribe, sorted by location of tribal headquarters. "Rural" includes individuals who obtained SHARCs as residents of an eligible rural community. "All" is the sum of tribal and rural SHARC holders for a regulatory area based on location of tribal headquarters or rural community. Because some SHARC holders may fish in regulatory areas other than the location of the area of their tribal headquarters or rural residence, area totals in this table differ slightly from those in tables 5 and 6.

d. Pounds net (dressed) weight = 75% of round (whole) weight.

Table 5.—Estimated harvests of halibut in numbers of fish and pounds net (dressed, head off) weight by regulatory area and subarea, 2014.

Regulatory area	Set hook gear						Hook & line or handline						All gear					
	Estimated number respondents		Estimated number halibut harvested		Estimated pounds halibut harvested <sup>b</sup>		Estimated number respondents fished <sup>c</sup>		Estimated number halibut harvested		Estimated pounds halibut harvested <sup>b</sup>		Estimated number respondents fished <sup>c</sup>		Estimated number halibut harvested		Estimated pounds halibut harvested <sup>b</sup>	
	fished <sup>c</sup>		harvested		harvested <sup>b</sup>		respondents fished <sup>c</sup>		harvested		harvested <sup>b</sup>		respondents fished <sup>c</sup>		harvested		harvested <sup>b</sup>	
Southern Southeast Alaska	1,211	8,472	185,744	627	3,177	54,233	1,480	11,649	239,976	887	3,435	59,026						
Sitka LAMP Area	572	3,286	72,906	181	513	8,288	604	3,799	81,193	271	665	12,837						
Northern Southeast Alaska	571	4,055	82,037	231	1,142	19,765	664	5,197	101,802	308	1,354	25,127						
<b>Subtotal, Area 2C</b>	<b>2,283</b>	<b>15,812</b>	<b>340,686</b>	<b>1,007</b>	<b>4,832</b>	<b>82,285</b>	<b>2,670</b>	<b>20,645</b>	<b>422,971</b>	<b>1,424</b>	<b>5,454</b>	<b>96,990</b>						
Yakutat Area	67	490	10,101	23	107	1,982	78	597	12,082	36	223	2,691						
Prince William Sound	3A	241	1,646	127	525	12,156	273	2,171	43,805	134	301	5,823						
Cook Inlet	3A	121	1,480	128	1,501	21,380	201	2,981	50,365	110	481	7,145						
Kodiak Island Road System	3A	462	3,096	54,296	226	836	538	3,932	71,538	376	1,326	23,853						
Kodiak Island Other	3A	423	2,458	44,928	279	922	18,651	544	3,379	244	553	10,876						
<b>Subtotal, Area 3A</b>	<b>1,168</b>	<b>9,170</b>	<b>169,957</b>	<b>687</b>	<b>3,891</b>	<b>71,411</b>	<b>1,460</b>	<b>13,061</b>	<b>241,369</b>	<b>781</b>	<b>2,884</b>	<b>50,388</b>						
Chignik Area	19	48	1,126	20	38	451	26	86	1,577	8	8	119						
Lower Alaska Peninsula	3B	51	345	6,735	58	297	5,066	642	11,801	16	50	791						
<b>Subtotal, Area 3B</b>	<b>70</b>	<b>394</b>	<b>7,861</b>	<b>79</b>	<b>335</b>	<b>5,517</b>	<b>113</b>	<b>728</b>	<b>13,378</b>	<b>24</b>	<b>58</b>	<b>911</b>						
Eastern Aleutians - East	4A	56	284	5,840	42	84	1,807	67	367	34	127	2,204						
Eastern Aleutians - West	4A	4	0	0	5	3	80	7	3	6	15	142						
<b>Subtotal, Area 4A</b>	<b>57</b>	<b>284</b>	<b>5,840</b>	<b>44</b>	<b>87</b>	<b>1,887</b>	<b>70</b>	<b>371</b>	<b>7,727</b>	<b>39</b>	<b>141</b>	<b>2,346</b>						
Western Aleutians - East	4B	2	6	160	4	6	94	5	13	254	5	53						
<b>Subtotal, Area 4B</b>	<b>2</b>	<b>6</b>	<b>160</b>	<b>4</b>	<b>6</b>	<b>94</b>	<b>5</b>	<b>13</b>	<b>254</b>	<b>1</b>	<b>5</b>	<b>53</b>						
St Paul Island	4C	12	446	3,389	0	0	12	446	3,389	0	0	0						
<b>Subtotal, Area 4C</b>	<b>12</b>	<b>446</b>	<b>3,389</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>446</b>	<b>3,389</b>	<b>0</b>	<b>0</b>	<b>0</b>						
St Lawrence Island	4D	1	2	54	0	0	1	2	54	0	0	0						
<b>Subtotal, Area 4D</b>	<b>1</b>	<b>2</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>54</b>	<b>0</b>	<b>0</b>	<b>0</b>						
Bristol Bay	4E	8	16	299	11	135	861	13	151	4	1	29						
Yukon Delta	4E	20	708	9,366	228	4,549	60,398	241	5,258	0	0	0						
Norton Sound	4E	4	24	403	0	0	4	24	403	0	0	0						
<b>Subtotal, Area 4E</b>	<b>31</b>	<b>748</b>	<b>10,068</b>	<b>238</b>	<b>4,685</b>	<b>61,259</b>	<b>257</b>	<b>5,432</b>	<b>71,327</b>	<b>4</b>	<b>1</b>	<b>29</b>						
<b>Grand total</b>	<b>3,550</b>	<b>26,863</b>	<b>538,015</b>	<b>2,012</b>	<b>13,836</b>	<b>222,455</b>	<b>4,506</b>	<b>40,698</b>	<b>760,469</b>	<b>2,228</b>	<b>8,543</b>	<b>150,717</b>						

Source: ADF&G Division of Subsistence SHARC survey, 2015.

a. "Setline" = longline or skate. "Hand-operated gear" = rod and reel, or handline.

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

c. Because fishers may fish in more than one area, subtotals for regulatory areas and the state total might exceed the sum of the subarea values.

Table 6. –Alaska subsistence halibut harvests from 2003–2012 & 2014, by geographic area fished.

Geographic area	Subsistence halibut harvests, net weight (pounds)												Percentage of state total											
	Percent change between years												Percentage of state total											
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2014	2014 to average 2012 to 2014	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2014	
Southern Southeast Alaska	290,443	369,319	328,658	307,921	283,422	254,510	262,046	254,366	204,062	237,905	239,976	0.9%	-14.1%	27.9%	31.0%	27.9%	27.4%	27.5%	28.7%	30.4%	31.9%	29.2%	34.6%	31.6%
Sitka LAMP Area	173,323	147,312	133,545	147,526	132,190	104,973	89,812	76,988	83,436	74,514	81,193	9.0%	-30.2%	16.6%	12.3%	11.3%	13.1%	12.8%	11.8%	10.4%	9.7%	12.0%	10.8%	10.7%
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	21.7%	-13.0%	15.3%	13.4%	11.5%	11.1%	10.6%	11.1%	12.2%	11.7%	14.3%	12.2%	13.4%
<b>Subtotal, Area 2C</b>	<b>623,538</b>	<b>677,084</b>	<b>598,072</b>	<b>580,117</b>	<b>524,897</b>	<b>458,360</b>	<b>456,997</b>	<b>424,818</b>	<b>386,967</b>	<b>396,043</b>	<b>422,971</b>	<b>6.8%</b>	<b>-17.5%</b>	<b>59.9%</b>	<b>56.7%</b>	<b>50.8%</b>	<b>51.6%</b>	<b>50.8%</b>	<b>51.7%</b>	<b>53.1%</b>	<b>53.3%</b>	<b>55.5%</b>	<b>57.6%</b>	<b>55.6%</b>
Yakutat Area	11,198	20,153	36,515	19,187	17,516	16,084	14,390	18,064	15,762	20,113	12,082	-39.9%	-36.1%	1.1%	1.7%	3.1%	1.7%	1.7%	1.8%	1.7%	2.3%	2.3%	2.9%	1.6%
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	57.2%	-0.3%	2.7%	4.9%	5.8%	4.3%	5.1%	5.3%	3.9%	5.3%	4.7%	4.1%	5.8%
Cook Inlet	52,609	83,939	79,024	59,965	75,623	76,795	81,043	65,809	60,337	65,100	50,365	-22.6%	-28.1%	5.1%	7.0%	6.7%	5.3%	7.3%	8.7%	9.4%	8.3%	8.6%	9.5%	6.6%
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	-1.3%	-35.5%	11.0%	10.8%	11.4%	12.5%	12.6%	10.9%	12.5%	12.9%	11.5%	10.6%	9.4%
Kodiak Island Other	79,256	111,944	110,824	111,752	96,206	100,540	91,202	83,432	77,276	67,914	63,578	-6.4%	-31.7%	7.6%	9.4%	9.4%	9.9%	9.3%	11.3%	10.6%	10.5%	11.1%	9.9%	8.4%
<b>Subtotal, Area 3A</b>	<b>285,500</b>	<b>403,610</b>	<b>429,275</b>	<b>379,258</b>	<b>372,289</b>	<b>337,403</b>	<b>328,480</b>	<b>312,650</b>	<b>266,104</b>	<b>253,516</b>	<b>241,369</b>	<b>-4.8%</b>	<b>-28.3%</b>	<b>27.4%</b>	<b>33.8%</b>	<b>36.4%</b>	<b>33.7%</b>	<b>36.1%</b>	<b>38.0%</b>	<b>38.1%</b>	<b>39.2%</b>	<b>38.1%</b>	<b>36.9%</b>	<b>31.7%</b>
Chignik Area	10,500	12,053	14,783	17,780	15,397	11,842	5,889	8,857	3,621	2,795	1,577	-43.6%	-84.3%	1.0%	1.0%	1.3%	1.6%	1.5%	1.3%	0.7%	0.7%	0.5%	0.4%	0.2%
Lower Alaska Peninsula	16,977	21,467	31,442	30,762	32,351	30,406	19,603	17,152	18,390	13,164	11,801	-10.4%	-49.1%	1.6%	1.8%	2.7%	2.7%	3.1%	3.4%	2.3%	2.2%	2.6%	1.9%	1.6%
<b>Subtotal, Area 3B</b>	<b>27,477</b>	<b>33,519</b>	<b>46,225</b>	<b>48,547</b>	<b>47,748</b>	<b>42,248</b>	<b>25,492</b>	<b>23,009</b>	<b>22,011</b>	<b>15,959</b>	<b>13,378</b>	<b>-16.2%</b>	<b>-59.7%</b>	<b>2.6%</b>	<b>2.8%</b>	<b>3.9%</b>	<b>4.3%</b>	<b>4.6%</b>	<b>4.8%</b>	<b>3.0%</b>	<b>2.9%</b>	<b>3.2%</b>	<b>2.3%</b>	<b>1.8%</b>
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	-15.6%	-62.9%	1.9%	2.2%	2.9%	2.3%	2.1%	2.1%	3.8%	1.7%	1.8%	1.3%	1.0%
Eastern Aleutians-West	1,852	2,162	1,734	1,069	2,193	509	409	1,205	790	482	80	-83.3%	-93.5%	0.2%	0.2%	0.1%	0.1%	0.2%	0.1%	0.0%	0.2%	0.1%	0.1%	0.0%
<b>Subtotal, Area 4A</b>	<b>21,197</b>	<b>28,877</b>	<b>35,615</b>	<b>27,062</b>	<b>14,946</b>	<b>19,553</b>	<b>33,499</b>	<b>14,548</b>	<b>13,606</b>	<b>9,543</b>	<b>7,727</b>	<b>-19.0%</b>	<b>-64.6%</b>	<b>2.0%</b>	<b>2.4%</b>	<b>3.0%</b>	<b>2.4%</b>	<b>1.4%</b>	<b>2.2%</b>	<b>3.9%</b>	<b>1.8%</b>	<b>2.0%</b>	<b>1.4%</b>	<b>1.0%</b>
Western Aleutians-East	2,582	916	1,351	2,761	1,997	4,737	1,175	450	537	1,698	254	-85.0%	-86.0%	0.2%	0.1%	0.1%	0.2%	0.2%	0.5%	0.1%	0.1%	0.1%	0.2%	0.0%
<b>Subtotal, Area 4B</b>	<b>2,582</b>	<b>916</b>	<b>1,351</b>	<b>2,761</b>	<b>1,997</b>	<b>4,737</b>	<b>1,175</b>	<b>450</b>	<b>537</b>	<b>1,698</b>	<b>254</b>	<b>-85.0%</b>	<b>-86.0%</b>	<b>0.2%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.2%</b>	<b>0.2%</b>	<b>0.5%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.2%</b>	<b>0.0%</b>
St. George Island	2,042	1,823	2,145	3,443	3,736	1,150	700	720	490	0	0	-100.0%	0.2%	0.2%	0.2%	0.3%	0.4%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%
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	188.2%	-53.8%	2.0%	0.7%	0.5%	0.5%	1.1%	0.5%	0.7%	1.3%	0.2%	0.2%	0.4%
<b>Subtotal, Area 4C</b>	<b>22,881</b>	<b>9,734</b>	<b>7,716</b>	<b>8,527</b>	<b>15,077</b>	<b>6,057</b>	<b>6,323</b>	<b>10,859</b>	<b>1,648</b>	<b>1,176</b>	<b>3,389</b>	<b>188.2%</b>	<b>-62.2%</b>	<b>2.2%</b>	<b>0.8%</b>	<b>0.7%</b>	<b>0.8%</b>	<b>1.5%</b>	<b>0.6%</b>	<b>0.7%</b>	<b>1.4%</b>	<b>0.2%</b>	<b>0.2%</b>	<b>0.4%</b>
St. Lawrence Island	4,380	10,923	5,848	8,297	3,204	3,131	644	1,171	615	672	54	-92.0%	-98.6%	0.4%	0.9%	0.5%	0.7%	0.3%	0.4%	0.1%	0.1%	0.1%	0.1%	0.0%
<b>Subtotal, Area 4D</b>	<b>4,380</b>	<b>10,923</b>	<b>5,848</b>	<b>8,297</b>	<b>3,204</b>	<b>3,131</b>	<b>644</b>	<b>1,171</b>	<b>615</b>	<b>672</b>	<b>54</b>	<b>-92.0%</b>	<b>-98.6%</b>	<b>0.4%</b>	<b>0.9%</b>	<b>0.5%</b>	<b>0.7%</b>	<b>0.3%</b>	<b>0.4%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>0.0%</b>
Bristol Bay	435	203	2,169	1,336	2,116	84	0	0	403	329	1,160	252.1%	63.9%	0.0%	0.0%	0.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%
YK Delta	53,284	28,298	51,950	69,407	50,019	14,669	7,468	9,484	5,283	7,239	69,765	863.8%	134.8%	5.1%	2.4%	4.4%	6.2%	4.8%	1.7%	0.9%	1.2%	0.8%	1.1%	9.2%
Norton Sound	56	0	0	0	0	1,145	1,281	571	482	816	403	-50.6%	-7.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
<b>Subtotal, Area 4E</b>	<b>53,775</b>	<b>28,501</b>	<b>54,119</b>	<b>70,743</b>	<b>52,135</b>	<b>15,898</b>	<b>8,749</b>	<b>10,055</b>	<b>6,168</b>	<b>8,384</b>	<b>71,327</b>	<b>750.8%</b>	<b>131.2%</b>	<b>5.2%</b>	<b>2.4%</b>	<b>4.6%</b>	<b>6.3%</b>	<b>5.1%</b>	<b>1.8%</b>	<b>1.0%</b>	<b>1.3%</b>	<b>0.9%</b>	<b>1.2%</b>	<b>9.4%</b>
<b>Total<sup>a</sup></b>	<b>1,041,330</b>	<b>1,193,162</b>	<b>1,178,222</b>	<b>1,125,312</b>	<b>1,032,293</b>	<b>886,988</b>	<b>861,359</b>	<b>797,560</b>	<b>697,656</b>	<b>686,991</b>	<b>760,469</b>	<b>10.7%</b>	<b>-20.0%</b>	<b>100%</b>										

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, 2014

Regulatory area	SHARC holders	Number of hooks <sup>b</sup>																														Total <sup>a</sup>		
		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	
2C	No.	6,106	5	2	3	10	14	14	7	11	4	107	0	29	14	7	385	1	1	15	3	328	1	4	1	12	158	16	20	92	38	908		
	Pct.	0.2	0.1	0.1	0.4	0.6	0.6	0.3	0.5	0.2	4.7	0.0	1.3	0.6	0.3	16.9	0.1	0.1	0.7	0.1	14.4	0.1	0.2	0.1	0.5	6.9	0.7	0.9	4.0	1.7	39.9			
3A	No.	2,760	9	4	1	2	3	2	1	7	1	57	0	11	0	0	50	8	0	3	2	198	2	2	0	9	97	4	6	32	14	541		
	Pct.	0.8	0.3	0.1	0.1	0.3	0.1	0.1	0.6	0.1	5.2	0.0	1.0	0.0	0.0	4.6	0.7	0.0	0.3	0.1	18.1	0.1	0.1	0.0	0.8	8.9	0.4	0.6	2.9	1.3	49.6			
3B	No.	298	6	1	1	1	2	2	0	0	0	17	0	0	0	5	0	0	0	0	11	0	0	0	0	3	0	0	1	0	29			
	Pct.	6.6	1.5	1.2	1.5	2.4	2.4	0.0	0.0	0.0	17.9	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	11.4	0.0	0.0	0.0	0.0	3.3	0.0	0.0	1.2	0.0	31.3				
4A	No.	166	3	0	1	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	12	0	0	0	0	3	0	0	0	3	22			
	Pct.	4.9	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0	23.9	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	5.6	41.6			
4B	No.	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	4			
	Pct.	38.5	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	38.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.1			
4C	No.	33	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	0	0	8	0			
	Pct.	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	66.7	0.0			
4D	No.	8	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	1	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	54.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.5	0.0			
4E	No.	341	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	2	0	0	0	0	13	5	22		
	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	12.3	0.0	0.0	0.0	0.0	7.3	0.0	0.0	0.0	58.2	22.3				
Alaska	No.	9,719	28	6	7	13	19	18	8	18	6	182	0	40	14	7	441	9	1	18	4	554	3	6	1	21	262	20	26	125	56	1,521	115	3,550
	Pct.	0.8	0.2	0.2	0.4	0.5	0.5	0.2	0.5	0.2	5.1	0.0	1.1	0.4	0.2	12.4	0.3	0.0	0.5	0.1	15.6	0.1	0.2	0.0	0.6	7.4	0.6	0.7	3.5	1.6	42.8	3.2		

Source ADF&G Division of Subsistence, SHARC surveys, 2015.

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 harvested halibut by regulatory area fished, 2014.

Area <sup>b</sup>	Subsistence methods			Sport harvest <sup>a</sup>			Total halibut			Percentage of sport harvest
	Number	Net weight (lb)	Average per fish	Number	Net weight (lb)	Average per fish	Number	Net weight (lb)	Average per fish	
2C	20,645	422,971	20.5	5,454	96,990	17.8	26,099	519,961	19.9	64.4%
3A	13,061	241,369	18.5	2,884	50,388	17.5	15,945	291,757	18.3	33.4%
3B	728	13,378	18.4	58	911	15.8	786	14,288	18.2	0.6%
4A	371	7,727	20.9	141	2,346	16.6	512	10,073	19.7	1.6%
4B	13	254	20.0	5	53		18	307	17.3	0.0%
4C	446	3,389	7.6	0	0		446	3,389	7.6	0.0%
4D	2	54	22.5	0	0		2	54	22.5	0.0%
4E	5,432	71,327	13.1	1	29	28.5	5,433	71,355	13.1	0.0%
Alaska	40,698	760,469	18.7	8,543	150,717	17.6	49,241	911,186	18.5	100.0%

Source ADF&G Division of Subsistence, SHARC survey, 2015.

a. Sport harvest of halibut by SHARC holders.

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

Table 9.—Estimated harvests of halibut by gear type and participation, subsistence and sport fisheries, selected Alaska communities 2003–2012 & 2014.

Community <sup>a</sup>	Year	Number of SHARC holders <sup>b</sup>	Subsistence harvests												All harvests	
			Setline (fixed) gear			Hand-operated gear			Total subsistence			Sport harvest <sup>d</sup>			Estimated number fished	Estimated pounds harvested
			Estimated number fished	Estimated pounds harvested												
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				
	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				
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				

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Community <sup>a</sup> Year	Subsistence harvests													
	Setline (fixed) gear			Hand-operated gear			Total subsistence			Sport harvest <sup>d</sup>			All harvests	
	Number of SHARC holders <sup>b</sup>	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested	Estimated number fished						
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		
	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		
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		
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		
	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		

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Community <sup>a</sup>	Year	Number of SHARC holders <sup>b</sup>	Subsistence harvests													
			Setline (fixed) gear			Hand-operated gear			Total subsistence			Sport harvest <sup>d</sup>			All harvests	
			Estimated number fished	Estimated pounds harvested												
Toksook Bay	2003	532	8	3,790	47	20,709	54	24,500	0	0	54	0	0	54	24,500	
	2004	529	7	859	44	5,737	56	6,596	0	0	56	0	0	56	6,596	
	2005	522	5	602	60	14,269	61	14,870	2	98	62	2	98	62	14,968	
	2006	533	6	2,333	112	34,149	113	36,481	0	0	113	0	0	113	36,481	
	2007	533	17	1,451	100	6,469	112	7,921	0	0	112	0	0	112	7,921	
	2008	34	6	707	8	1,436	9	2,143	0	0	9	0	0	9	2,143	
	2009	33	3	266	10	789	10	1,055	0	0	10	0	0	10	1,055	
	2010	32	5	315	10	560	10	875	0	0	10	0	0	10	875	
	2011	32	2	378	7	219	8	597	0	0	8	0	0	8	597	
	2012	7	1	140	4	154	5	294	0	0	5	0	0	5	294	
	2014	115	0	0	121	32,023	121	32,023	0	0	121	0	0	121	32,023	
	2003	0														
	2004	70	16	878	23	1,076	31	1,954	0	0	31	0	0	31	1,954	
	2005	70	3	332	18	2,329	20	2,661	0	0	20	0	0	20	2,661	
2006	70	7	224	33	3,808	33	4,032	0	0	33	0	0	33	4,032		
2007	69	14	1,536	38	5,479	38	7,015	0	0	38	0	0	38	7,015		
2008	68	0	0	8	1,296	8	1,296	0	0	8	0	0	8	1,296		
2009	11	0	0	7	488	7	488	0	0	7	0	0	7	488		
2010	11	0	0	9	576	9	576	0	0	9	0	0	9	576		
2011	11	0	0	4	84	4	84	0	0	4	0	0	4	84		
2012	11	0	0	3	173	3	173	0	0	3	0	0	3	173		
2014	81	7	3,710	80	24,241	82	27,951	0	0	82	0	0	82	27,951		
2003	92	39	6,713	31	4,146	50	10,860	33	5,519	70	33	5,519	70	16,379		
2004	131	43	9,557	39	5,973	81	15,530	34	2,165	93	34	2,165	93	17,695		
2005	150	60	9,573	57	8,535	88	18,108	28	2,439	97	28	2,439	97	20,547		
2006	171	53	7,526	47	8,805	81	16,331	50	3,768	101	50	3,768	101	20,100		
2007	176	67	9,012	38	4,238	83	13,250	33	2,287	92	33	2,287	92	15,537		
2008	173	59	7,293	42	6,417	87	13,710	43	2,962	101	43	2,962	101	16,672		
2009	164	56	19,204	54	10,102	76	29,306	45	1,861	98	45	1,861	98	31,167		
2010	155	58	7,417	60	5,663	92	13,081	54	2,730	103	54	2,730	103	15,811		
2011	141	33	4,449	50	7,808	65	12,257	27	3,030	75	27	3,030	75	15,287		
2012	141	41	5,342	41	4,717	62	10,059	44	4,221	83	44	4,221	83	14,280		
2014	159	57	6,277	48	2,610	74	8,887	37	2,299	93	37	2,299	93	11,186		

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Source ADF&G Division of Subsistence SHARC surveys, 2004–2012 and 2015

- a. For data on all communities for 2014, 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, totals for Sand Point, Toksook Bay, and Tununak include SHARC holders and others identified as potential halibut fishers during household surveys. For 2014, the number of SHARC holders was 92 in Sand Point, 7 in Toksook Bay, and 5 in Tununak.
- c. Includes Dutch Harbor
- d. Sport harvests by SHARC holders only.

Table 10.—Halibut removals in Alaska by regulatory area, 2014.

Area	Pounds net weight						Total
	Commercial landings <sup>a</sup>	Sport <sup>b</sup>	Subsistence <sup>c</sup>	Commercial mortality	Bycatch	IPHC research	
2C	3,275,000	2,012,000	422,971	120,000	16,000	147,000	5,992,971
3A	7,383,000	3,674,000	241,369	439,000	1,610,000	278,000	13,625,369
3B	2,816,000	19,000	13,378	326,000	1,247,000	100,000	4,521,378
4	3,167,000	24,000	88,285	138,000	6,131,000	116,000	9,664,285
Alaska	16,641,000	5,729,000	766,002	1,023,000	9,004,000	641,000	33,804,002

Sources IPHC 2015:74; Williams 2015; ADF&G Division of Subsistence, SHARC surveys, 2015.

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

b. Projected harvests; includes sport landings and sport mortality.

c. Includes 5,533 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 760,469 pounds, including 82,752 pounds in Area 4.

Table 11.—Comparison of selected SHARC survey results, 2003–2012 & 2014.

	Study years										Percent change: 2014 compared to...		
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012		2014	Previous 10-year average
<b>Response to survey</b>													
Number of SHARCs issued <sup>1</sup>	11,635	13,813	14,306	14,206	15,047	11,565	11,733	10,953	11,145	9,944	9,719	-2.3%	-21.8%
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	-10.2%	-18.1%
Response rate	65.3%	61.7%	59.9%	59.3%	57.7%	63.3%	59.2%	60.9%	68.1%	70.9%	65.2%	-8.1%	4.1%
<b>Subsistence halibut fishing</b>													
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	2.5%	-15.1%
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%	4.9%	8.1%
Estimated number of subsistence halibut	43,926	52,412	55,875	54,089	53,697	48,604	45,434	43,332	38,162	37,093	40,698	9.7%	-13.9%
Estimated net pounds of subsistence 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	10.7%	-20.0%
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	0.9%	-6.6%
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	7.0%	1.7%
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	8.0%	-5.1%
<b>Sport halibut fishing by SHARC holders</b>													
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	-0.1%	-14.4%
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%	2.2%	9.1%
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	-2.1%	-19.8%
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	3.1%	-24.8%
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	5.3%	-5.1%
Average harvest per fisher, fish	4.2	4.0	4.5	3.9	4.3	4.4	3.9	3.8	4.0	4.0	3.8	-2.0%	-6.0%
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	3.3%	-11.0%
<b>Total number of halibut fishers</b>													
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	4.0%	-10.9%
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%	6.4%	13.3%

Sources: Fall and Koster 2014; ADF&G Division of Subsistence, SHARC surveys, 2015.

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

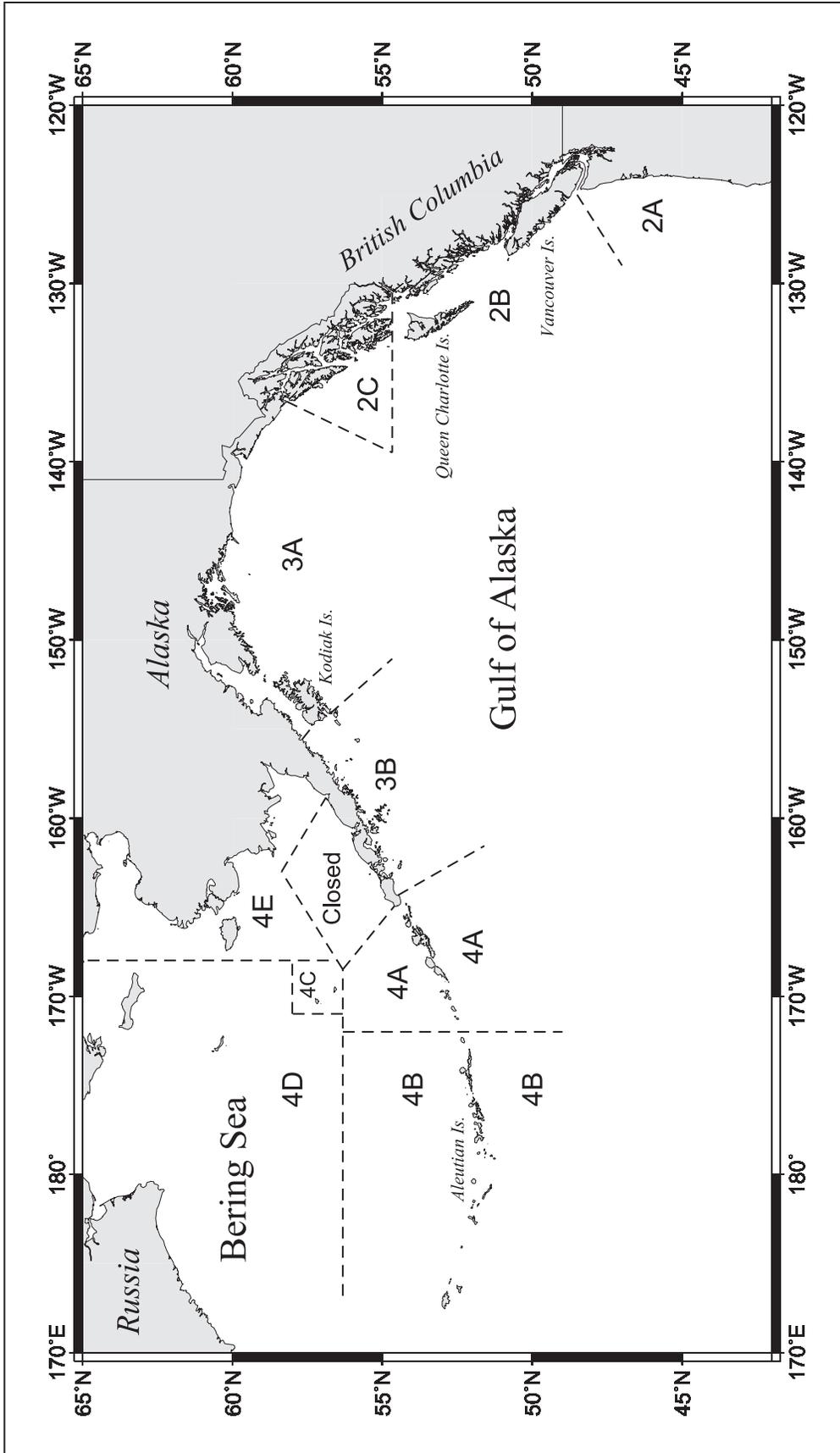


Figure 1.—Regulatory areas for the Pacific halibut fishery.

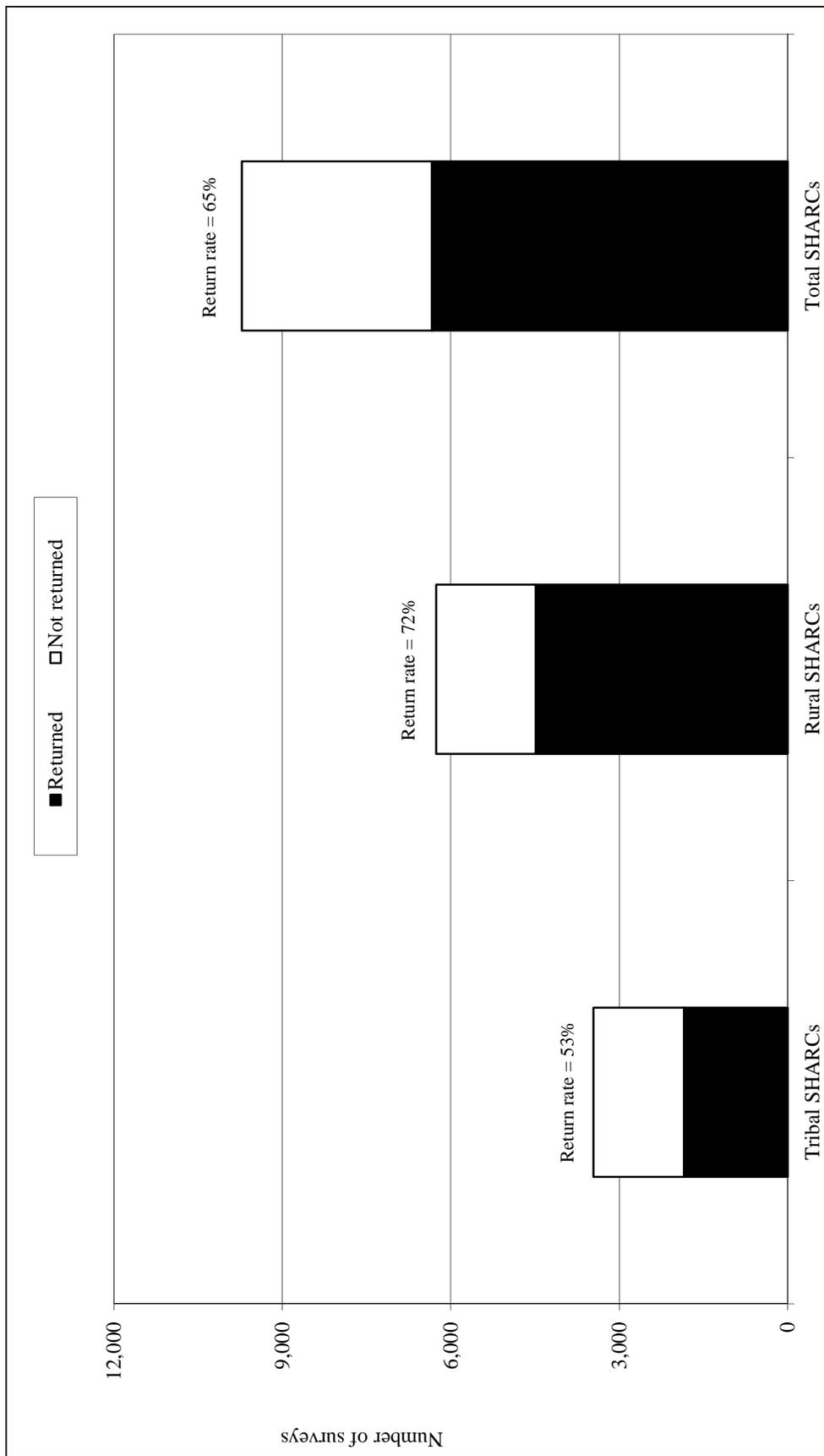


Figure 2.—Number of surveys returned and return rates for subsistence halibut surveys, by SHARC type, 2014.

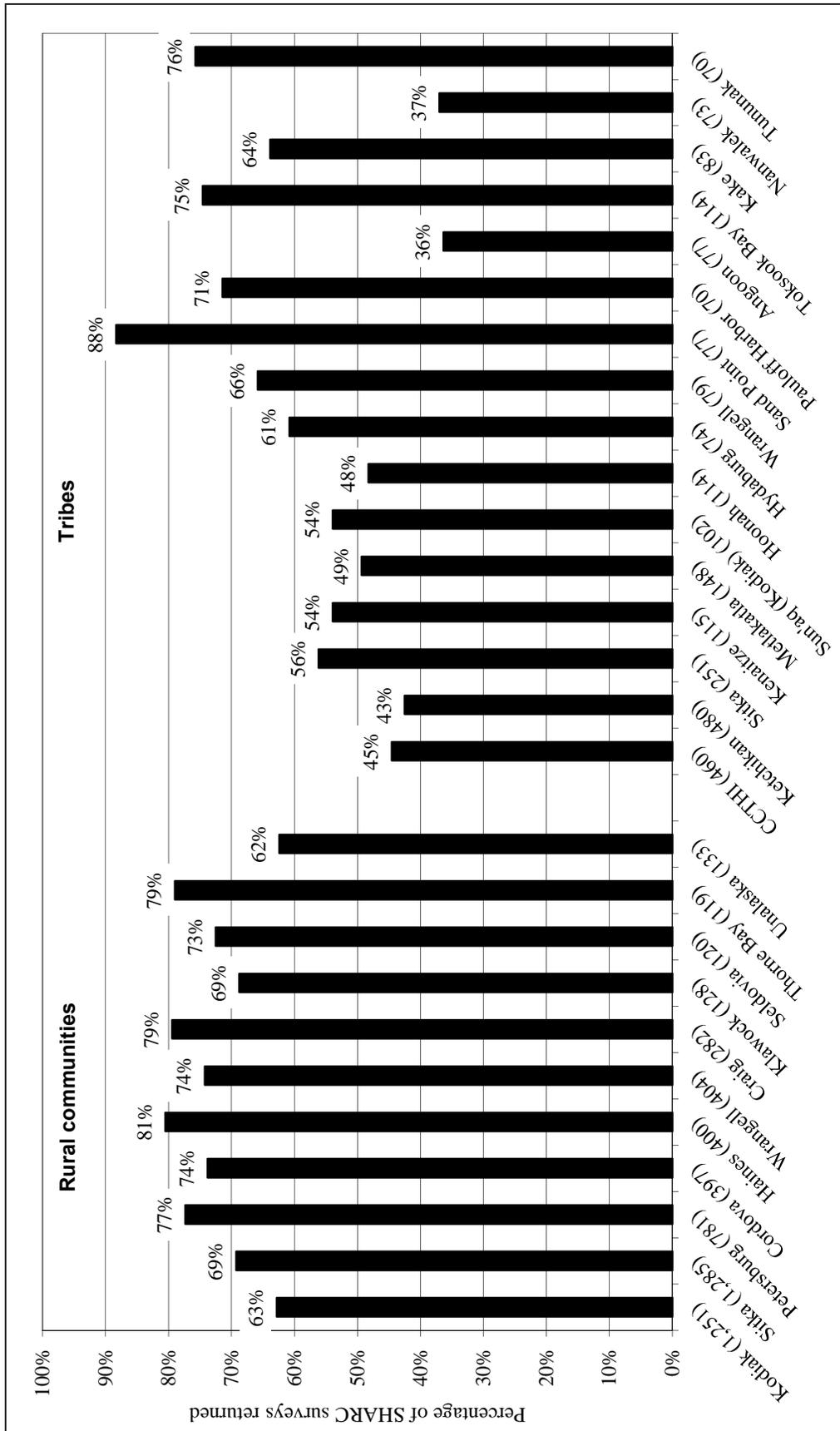


Figure 3.—SHARC survey return rates, communities with more than 100 SHARCs issued and tribes with more than 70 SHARCs issued, 2014.

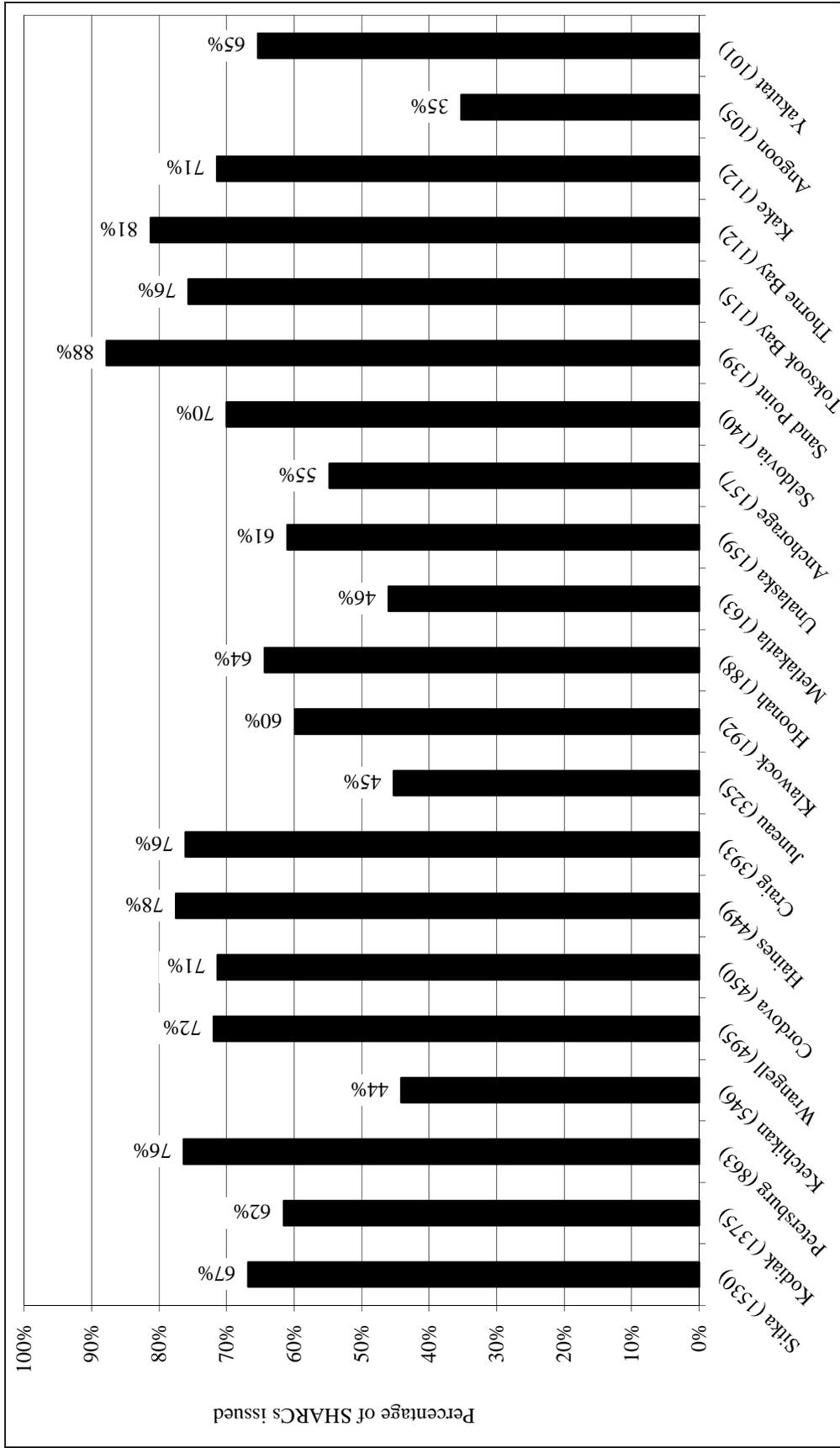


Figure 4.—Return rate by place of residence, 2014.

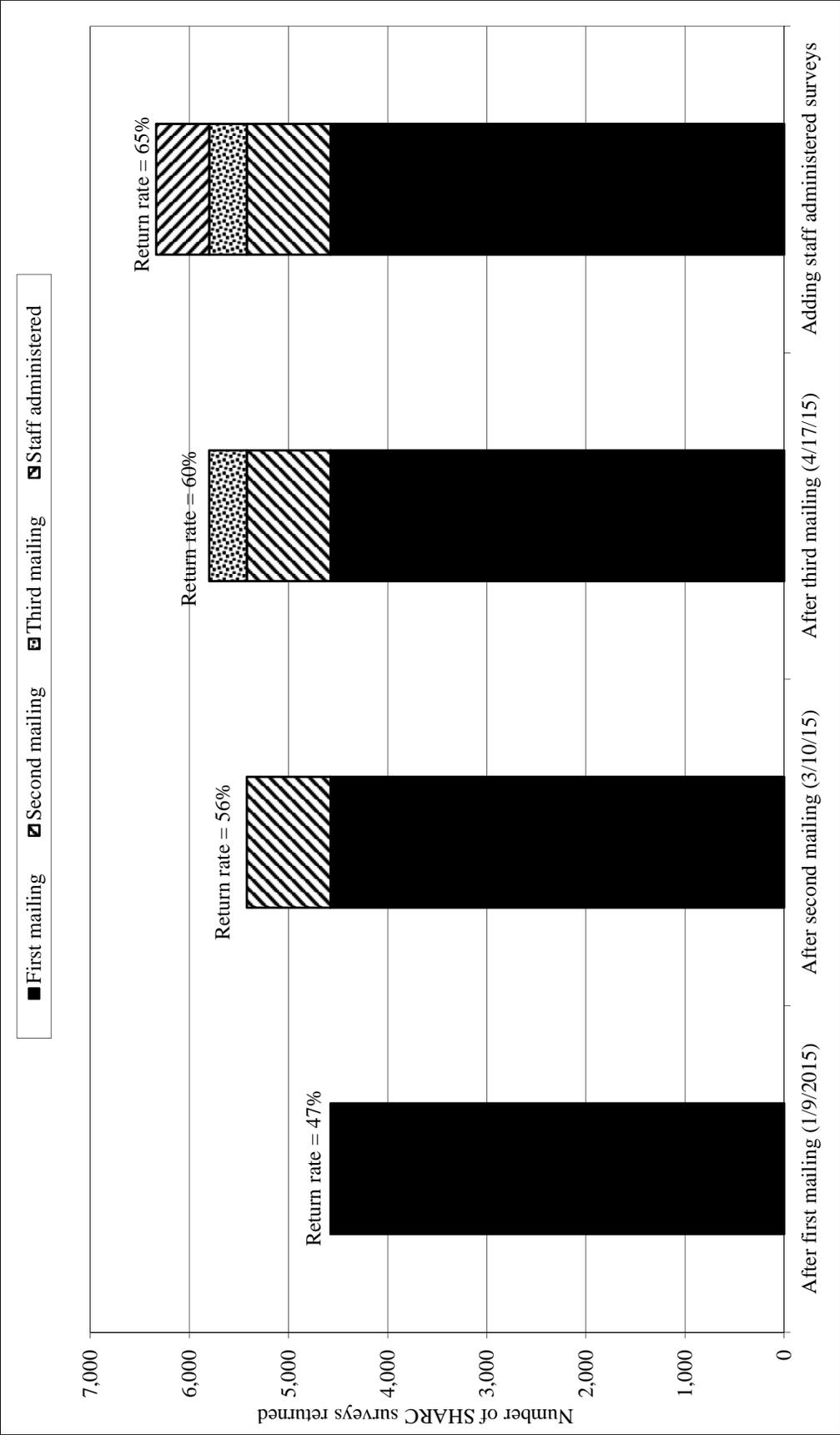
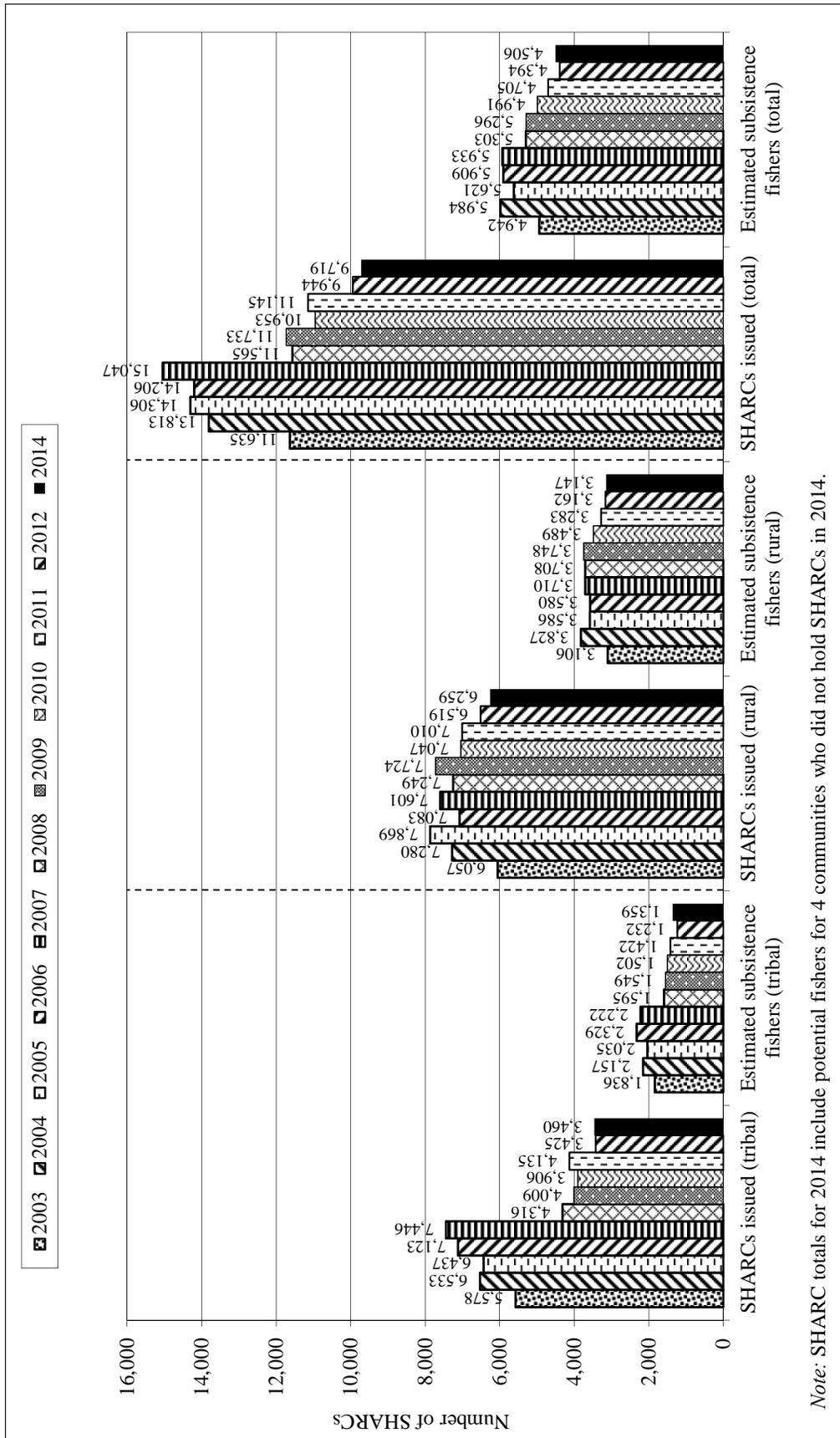


Figure 5.—Number of survey responses by response category, 2014.



Note: SHARC totals for 2014 include potential fishers for 4 communities who did not hold SHARCs in 2014.

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

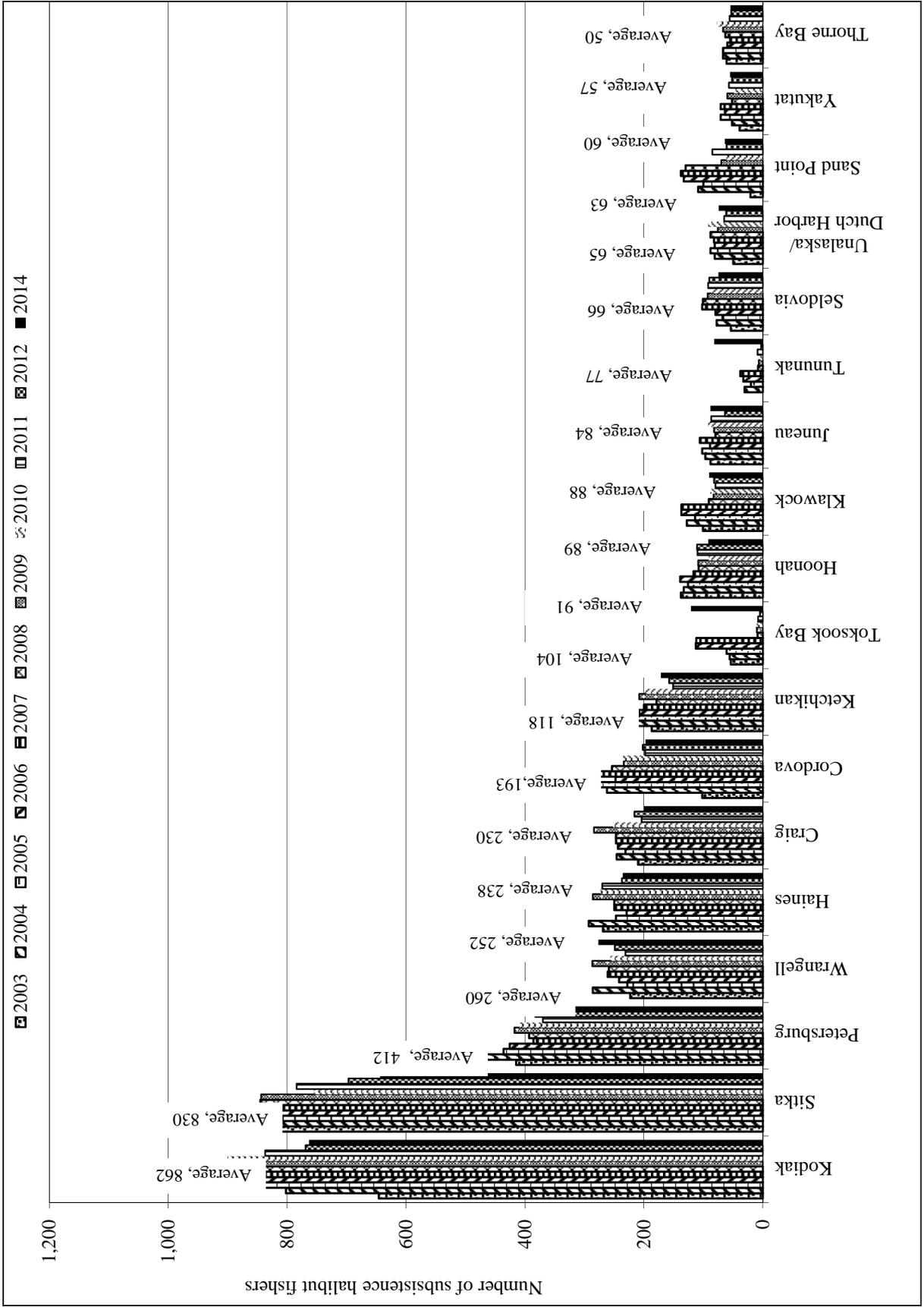


Figure 7.—Number of fishers by residence, 2003–2012 & 2014.

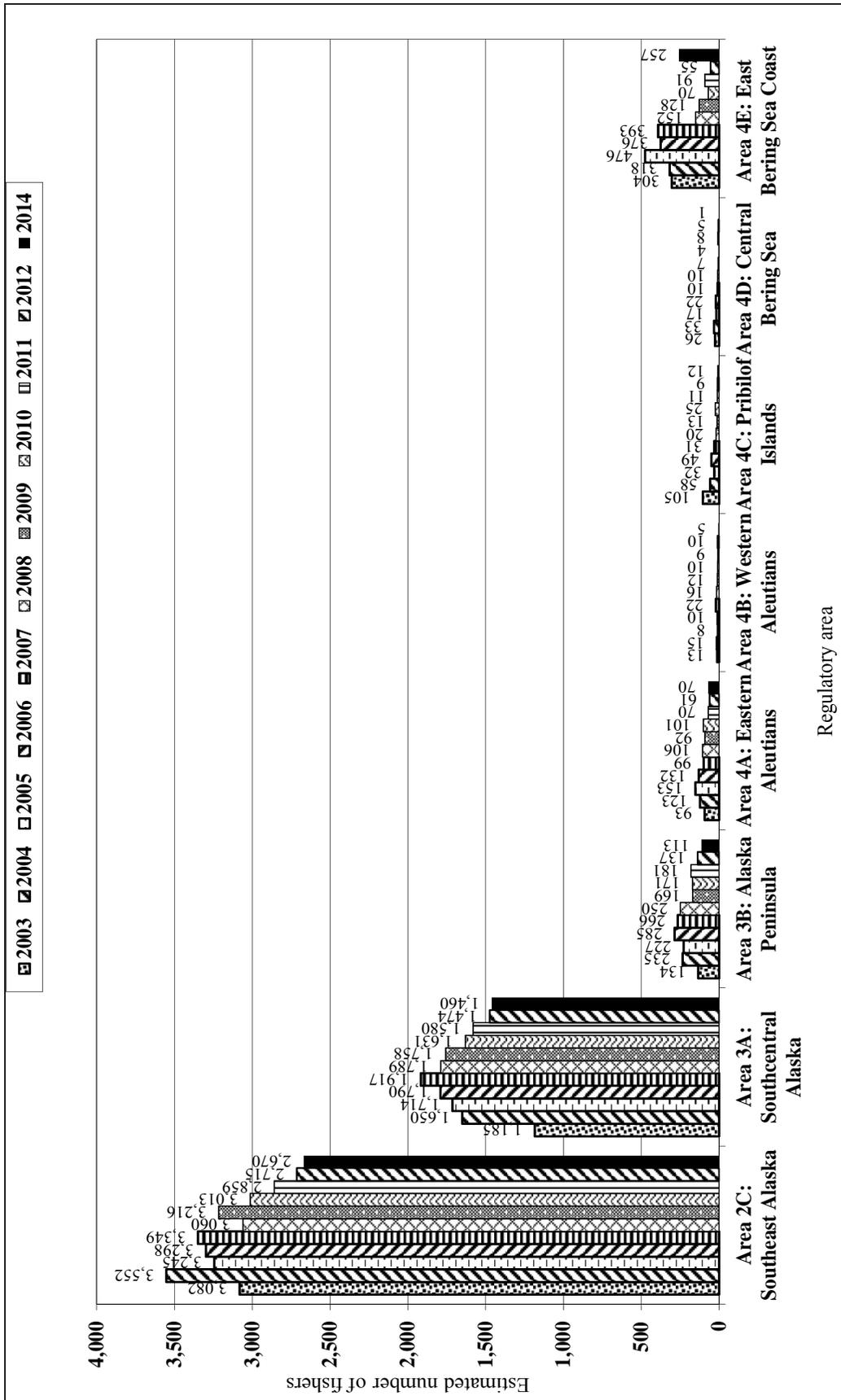


Figure 8.—Estimated number of Alaska subsistence halibut fishers, 2003–2012 & 2014 by regulatory area fished.

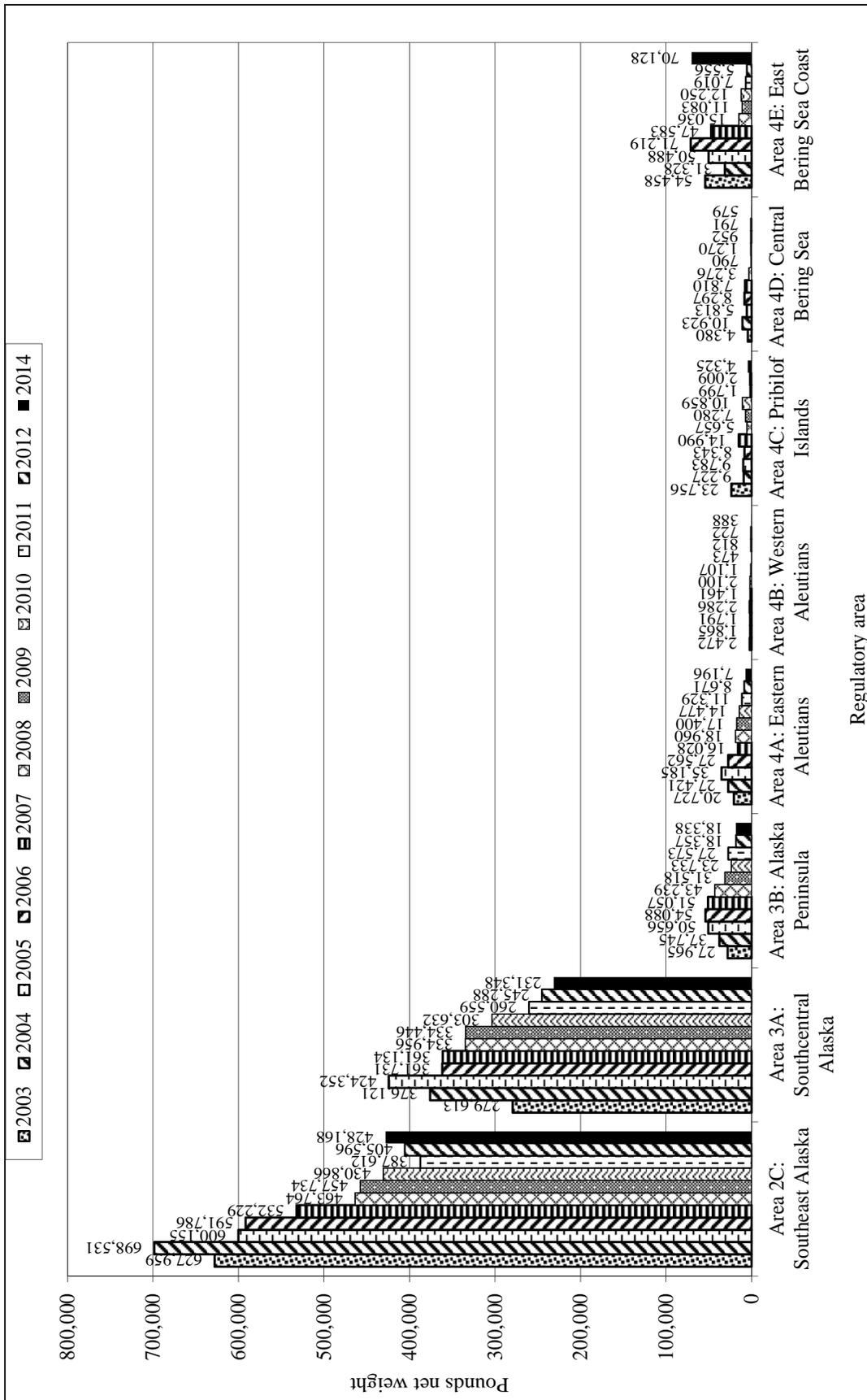


Figure 9.—Estimated subsistence halibut harvests, pounds net weight, by regulatory area of tribe and rural community, 2003–2012 & 2014.

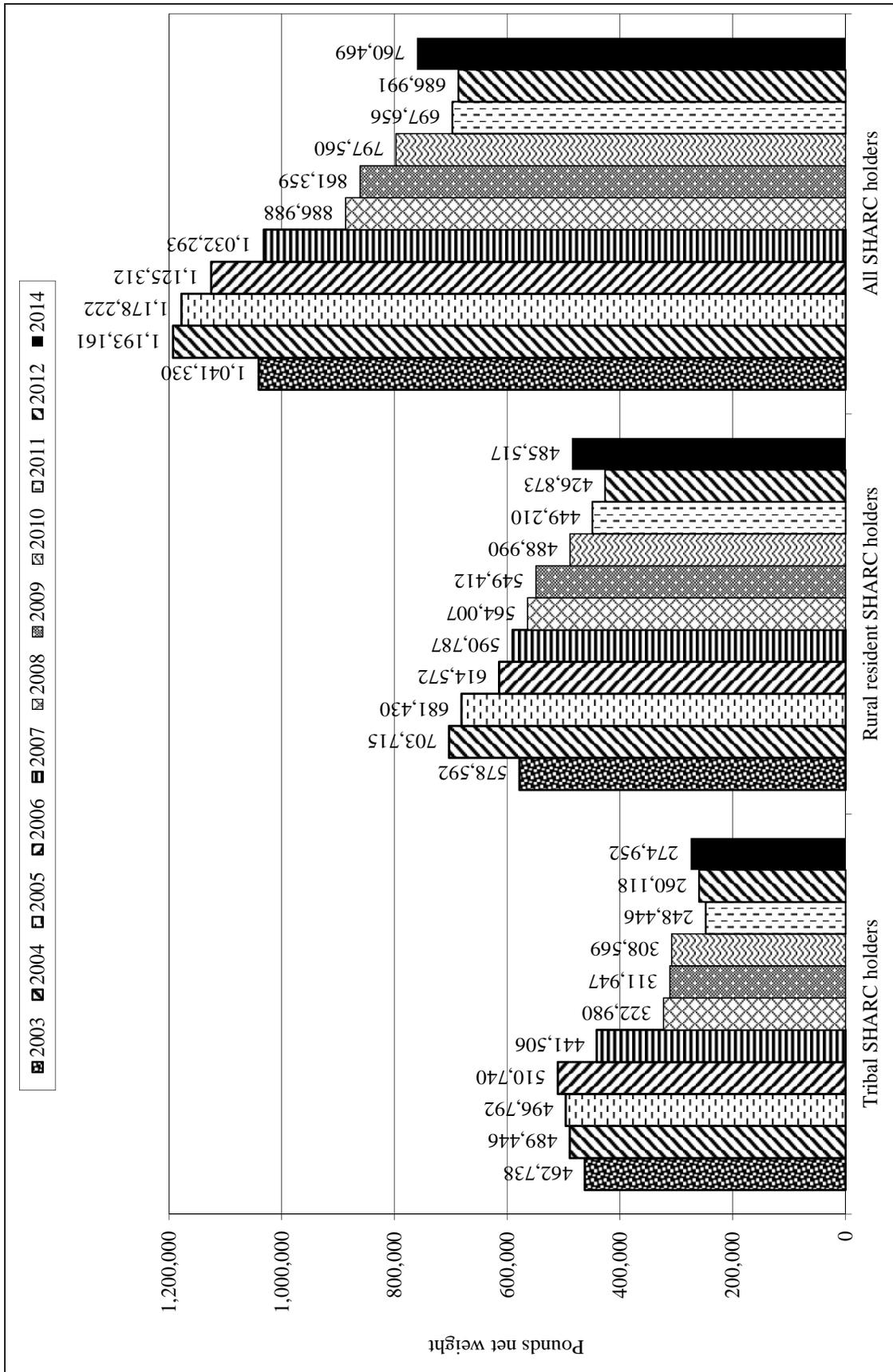


Figure 10.—Estimated Alaska subsistence halibut harvests in pounds net weight by SHARC type, 2003–2012 & 2014.

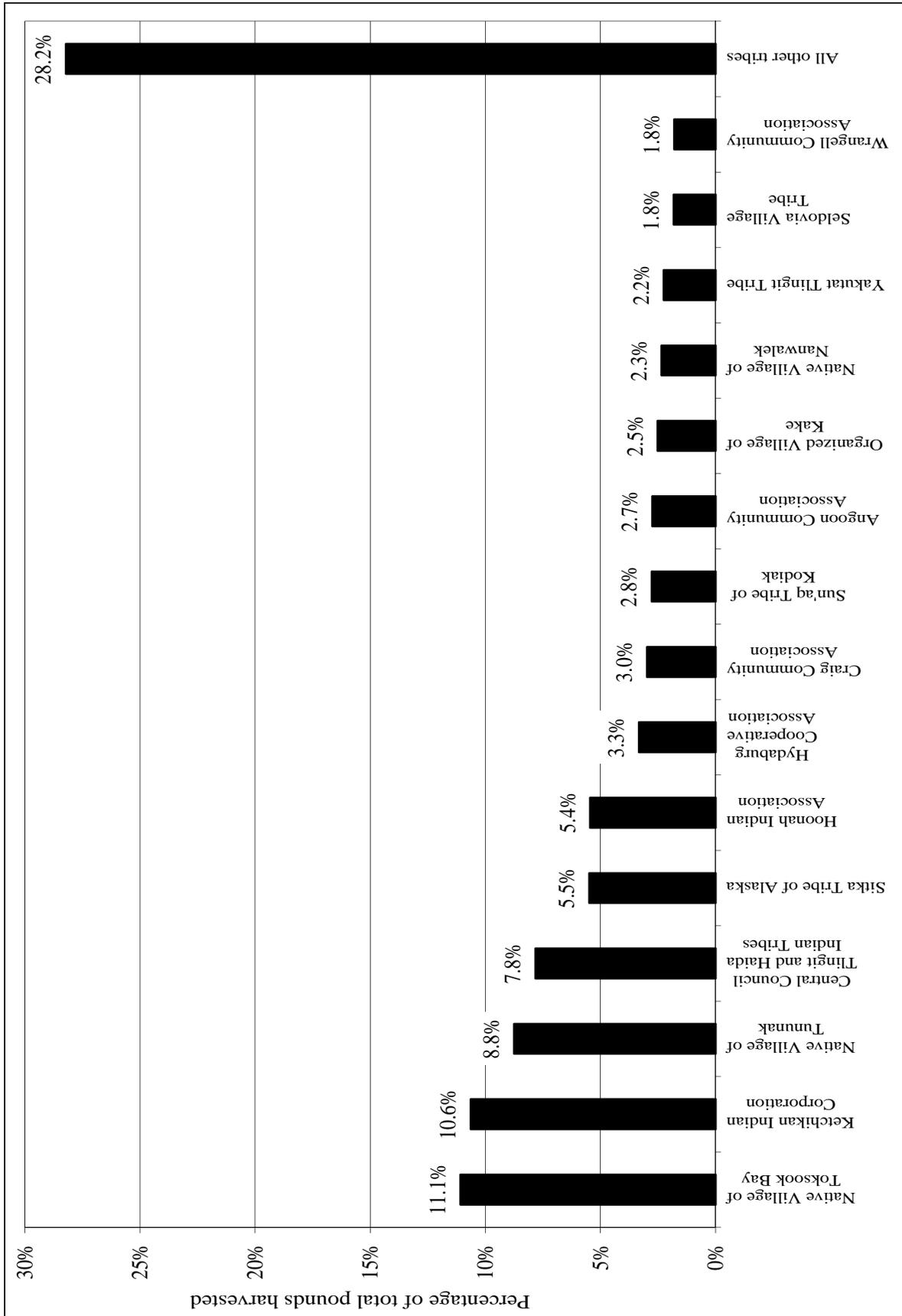


Figure 11.—Percentage of tribal subsistence halibut harvest by tribe, 2014.

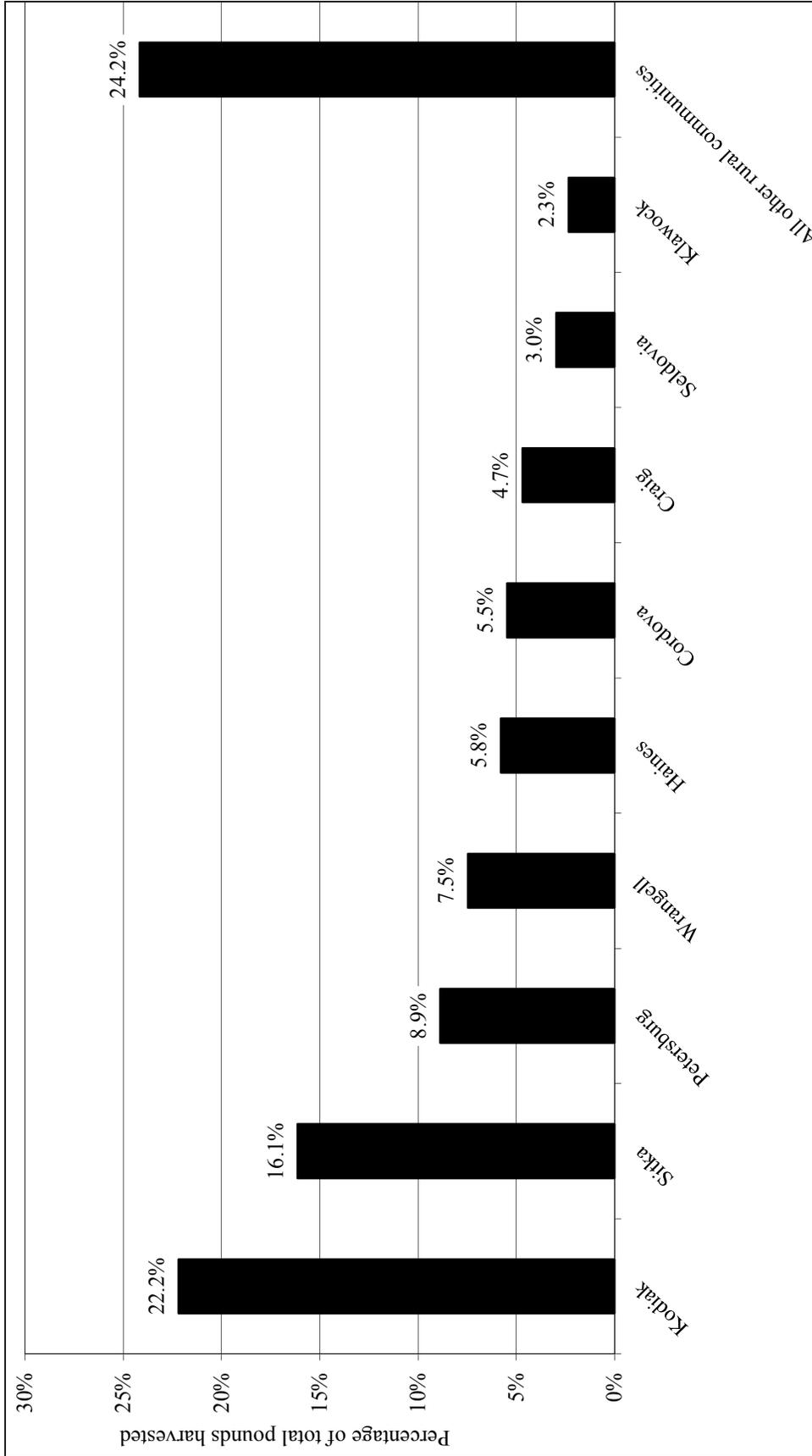


Figure 12.—Percentage of rural community subsistence halibut harvest by community, 2014.

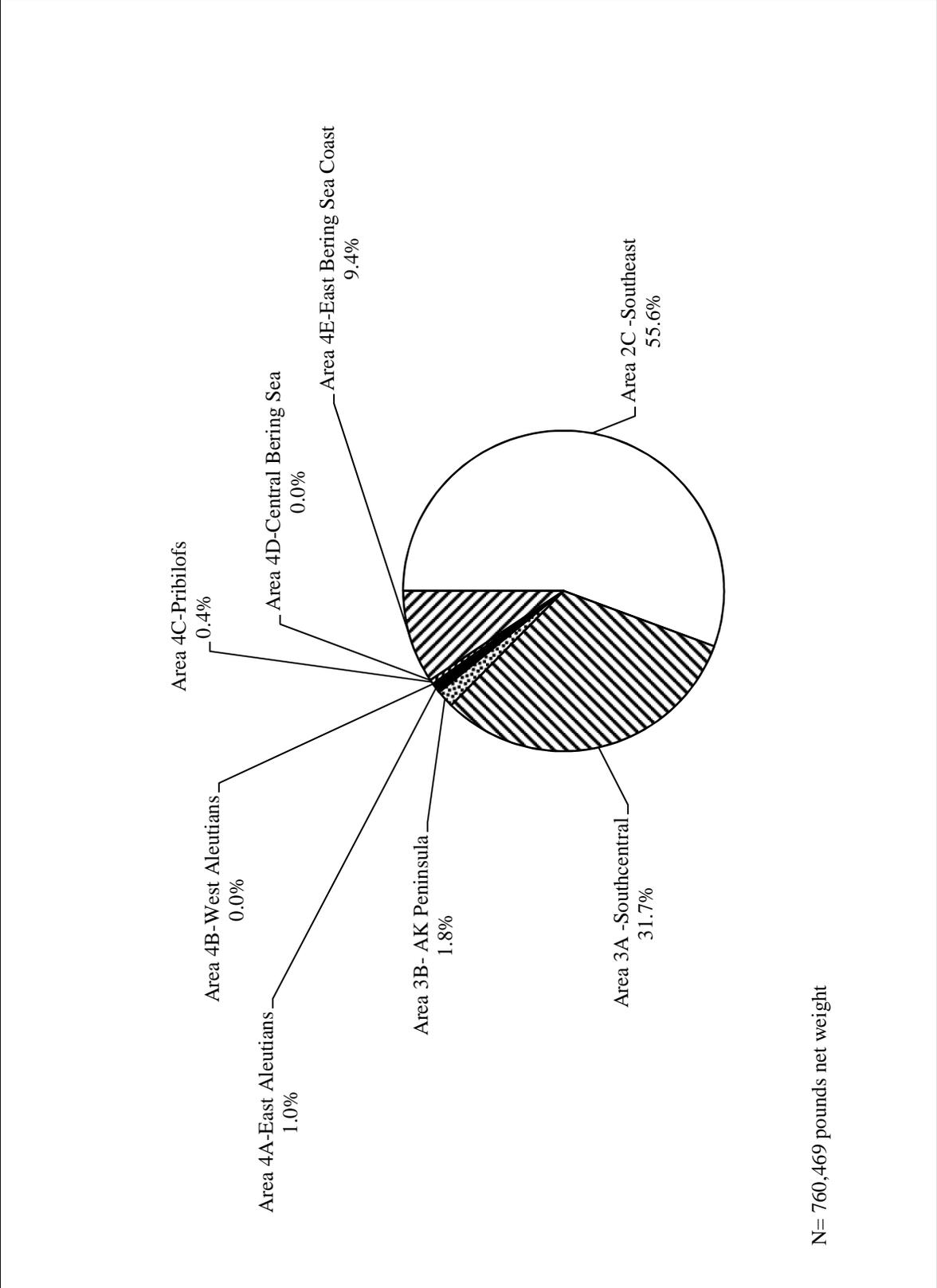


Figure 13.—Percentage of subsistence halibut harvest by regulatory area fished, 2014.

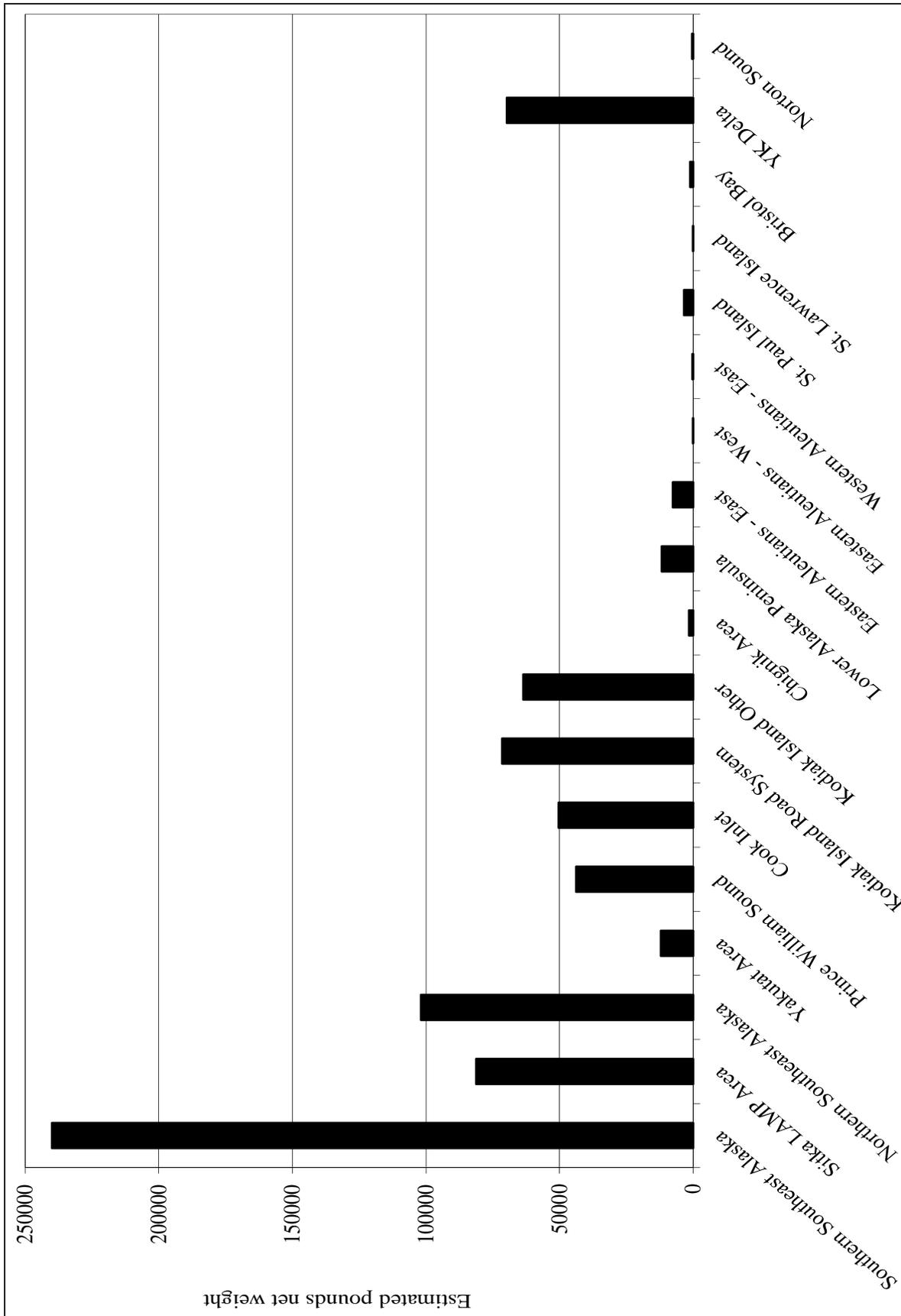
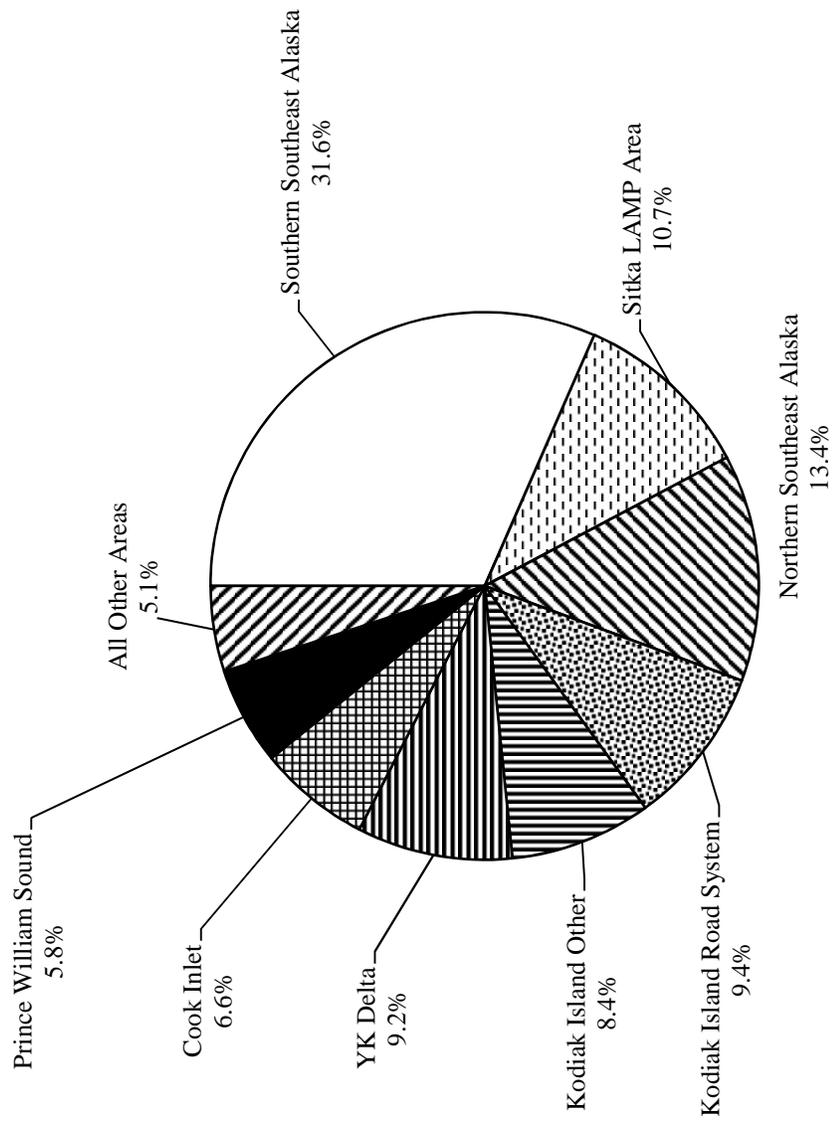


Figure 14.—Alaska subsistence halibut harvests by geographic area, 2014.



N = 760,469 pounds net weight

Figure 15.—Percentage of Alaska subsistence halibut harvest by geographic area, 2014

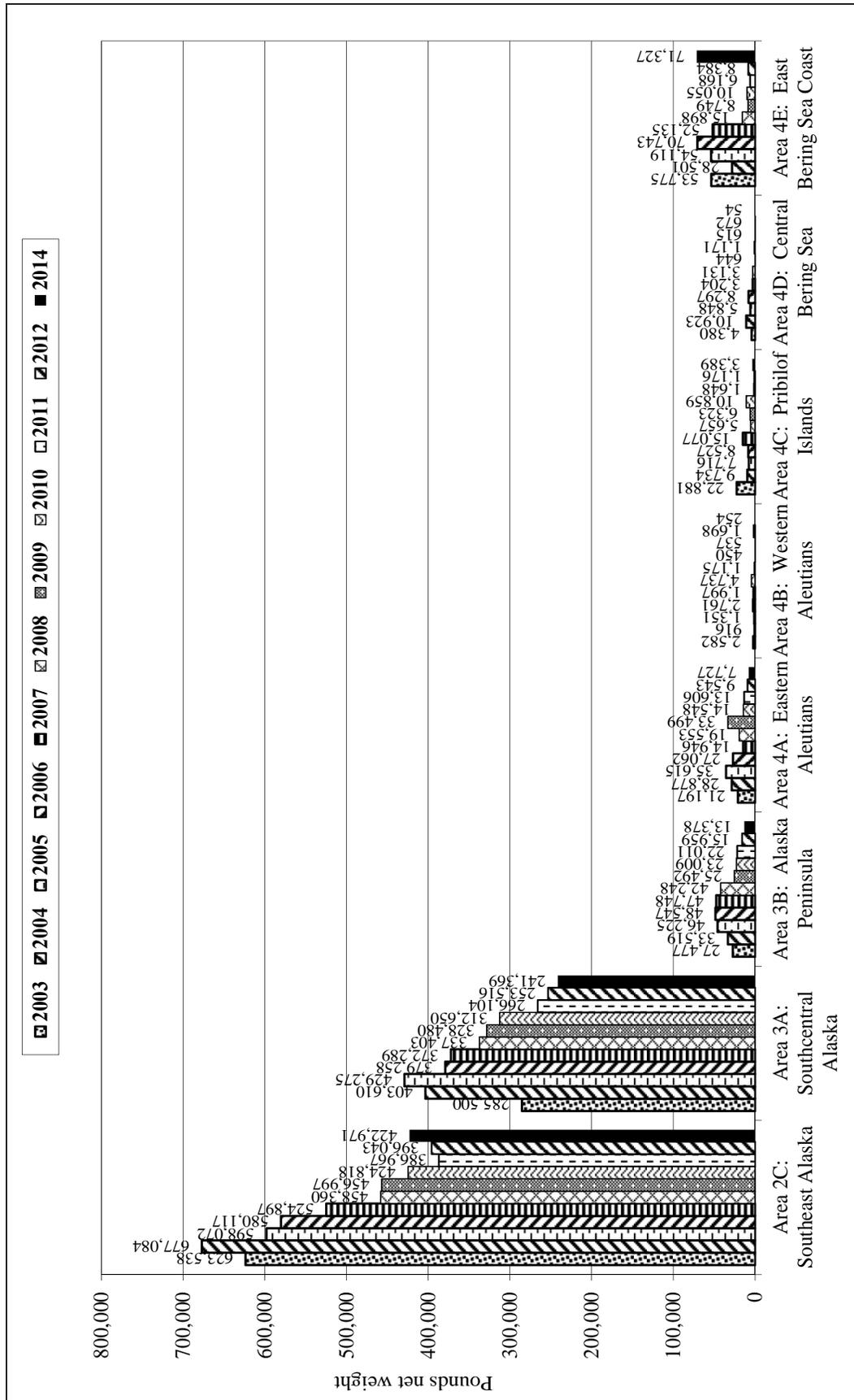


Figure 16.—Estimated subsistence halibut harvests, pounds net weight, by regulatory area fished, 2003–2012 & 2014.

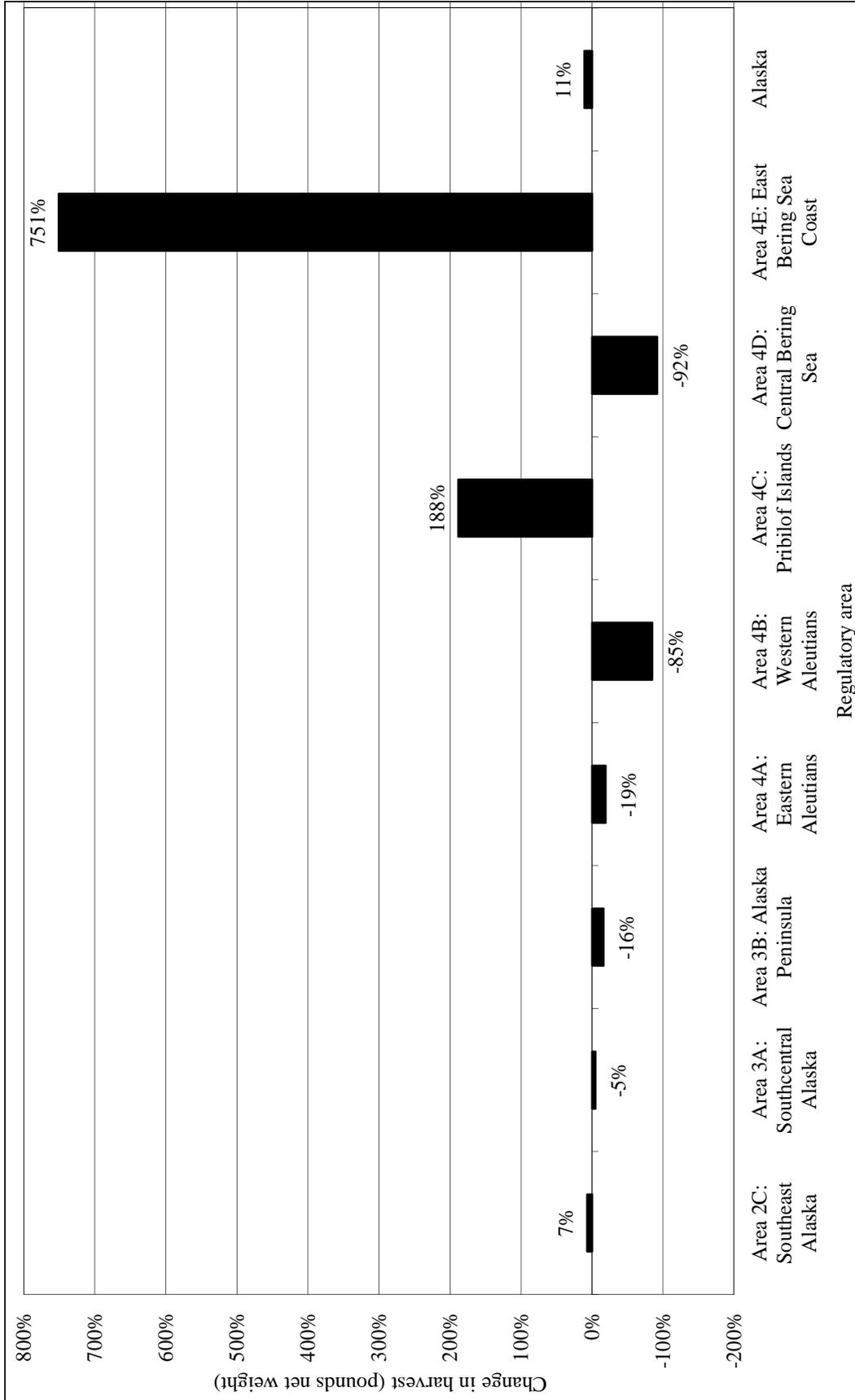


Figure 17.—Change in Alaska subsistence halibut harvests from 2012 to 2014 by regulatory area fished.

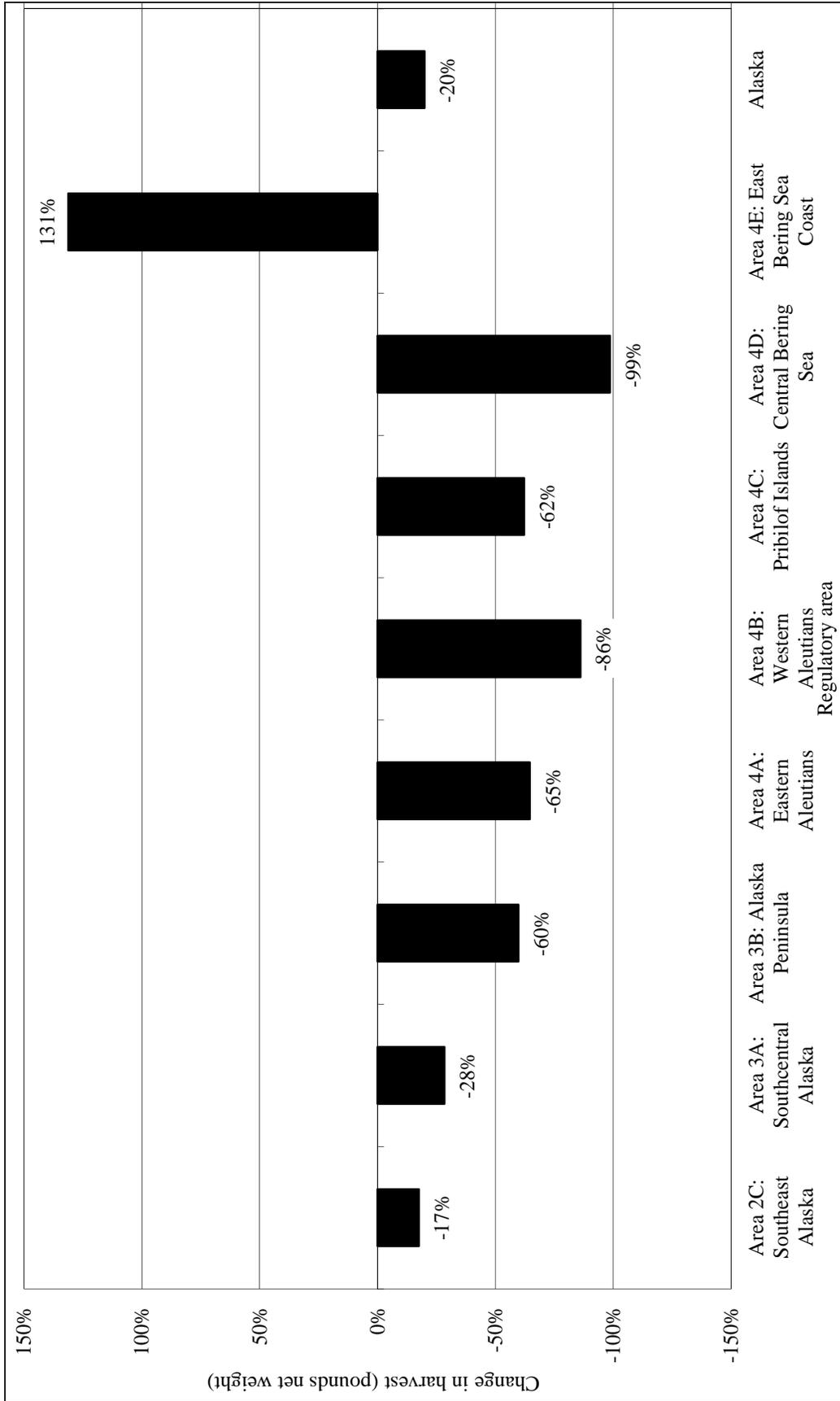


Figure 18. –Change in Alaska subsistence halibut harvests in 2014 compared to recent 10-year average (2003–2012) by regulatory area, fished.

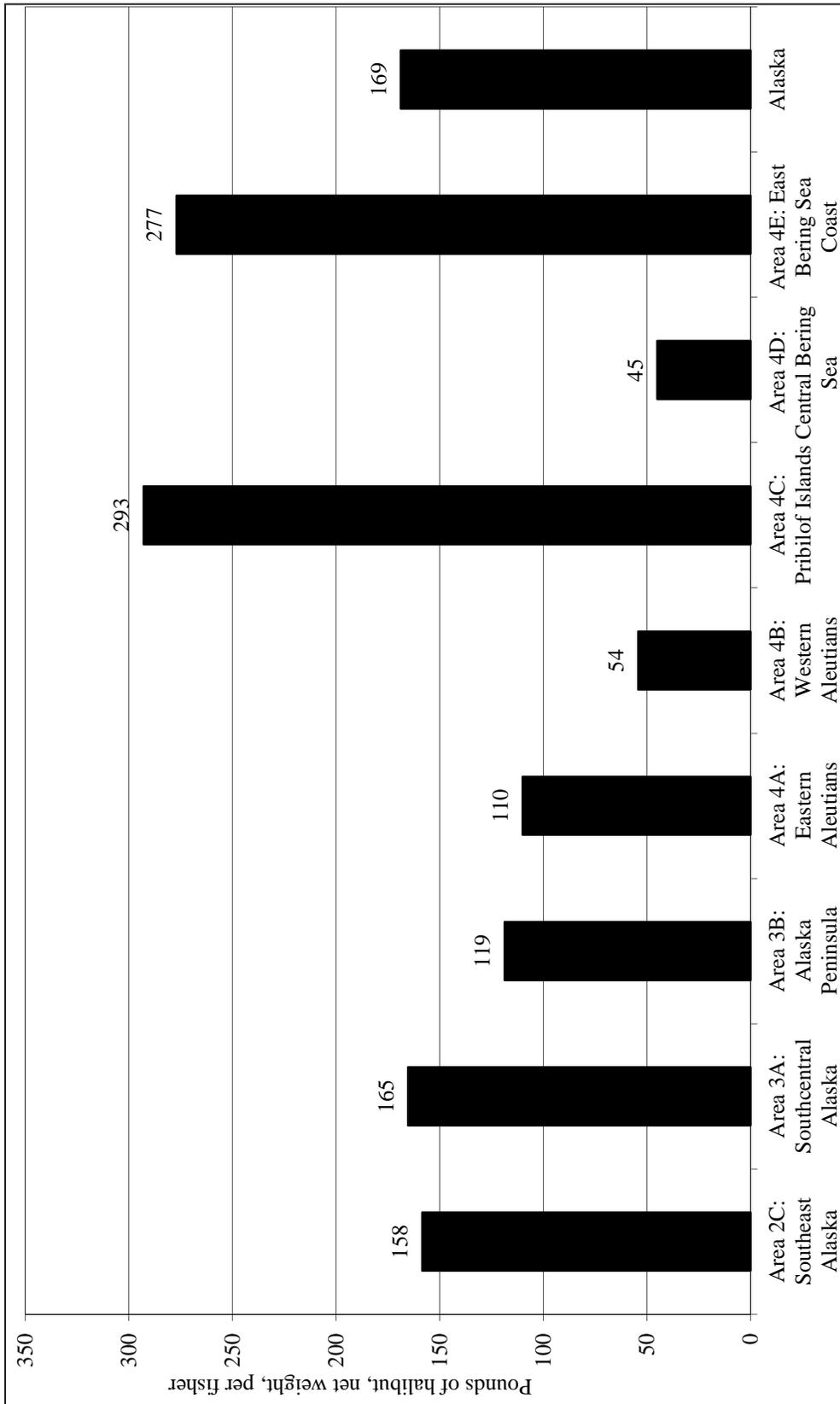


Figure 19.—Average subsistence harvest of halibut per fisher in Alaska, 2014, by regulatory area, in pounds net weight.

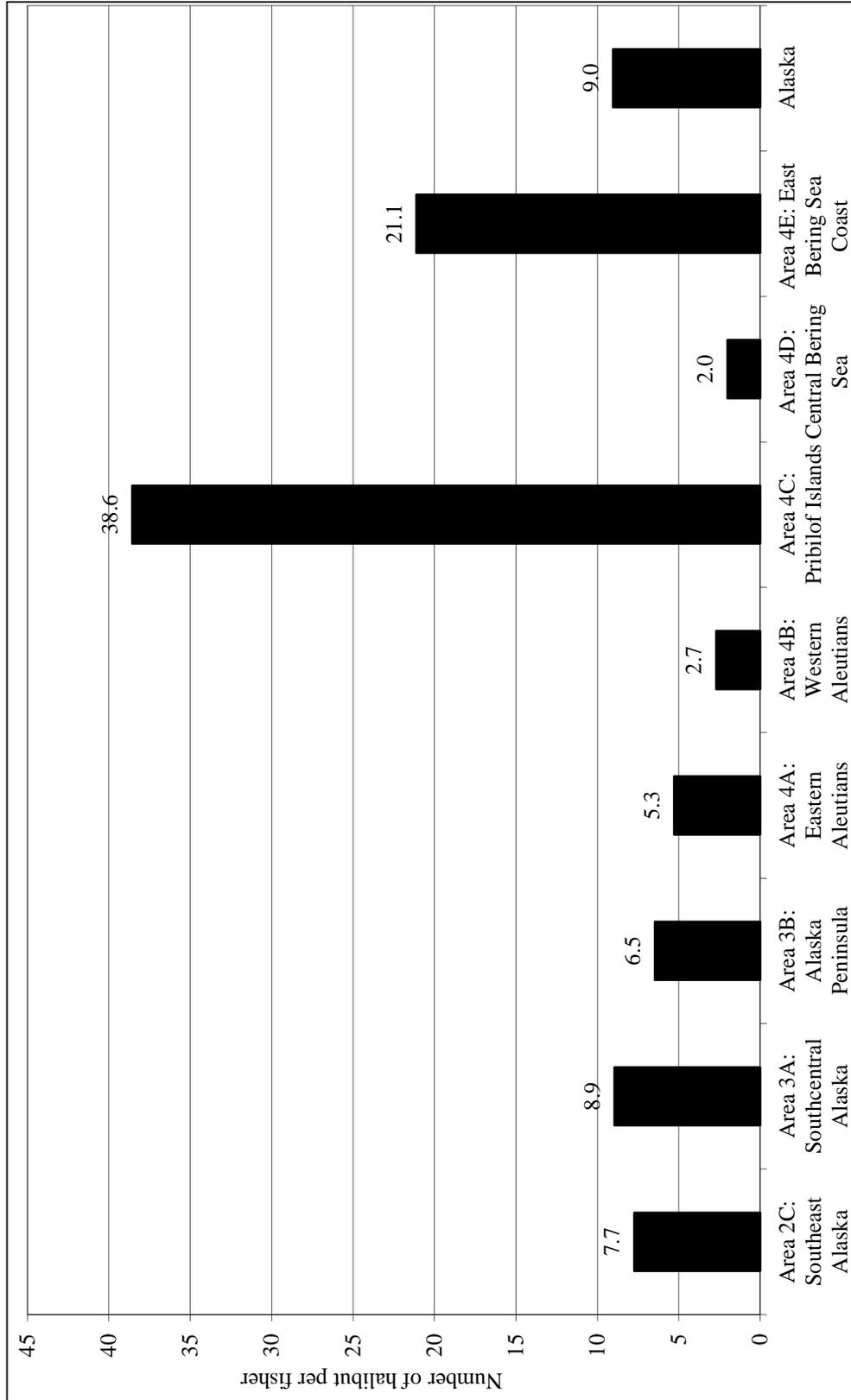


Figure 20.—Average subsistence harvest of halibut per fisher in Alaska, 2014, by regulatory area, in number of fish.

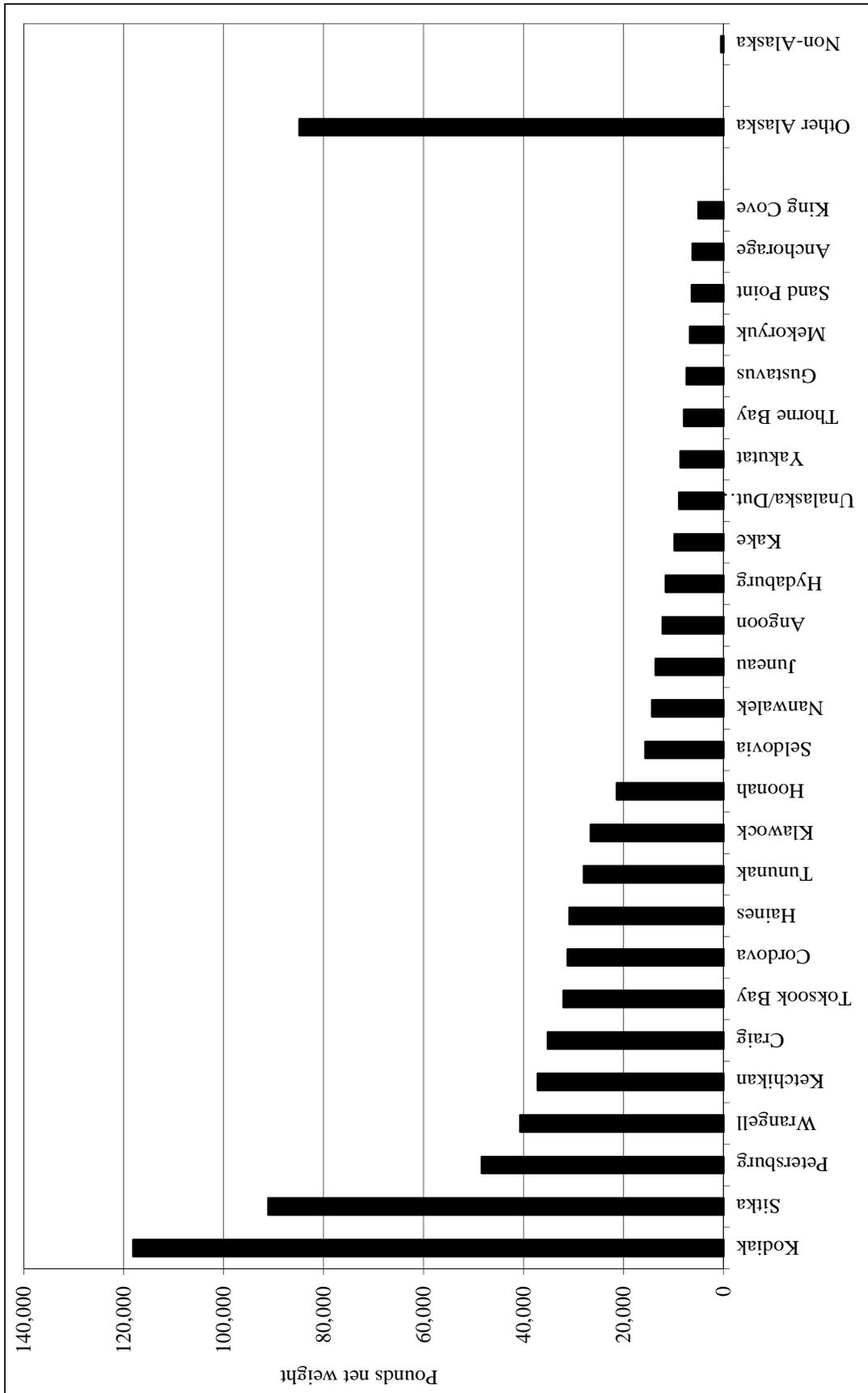


Figure 21.—Alaska subsistence halibut harvests by place of residence, 2014.

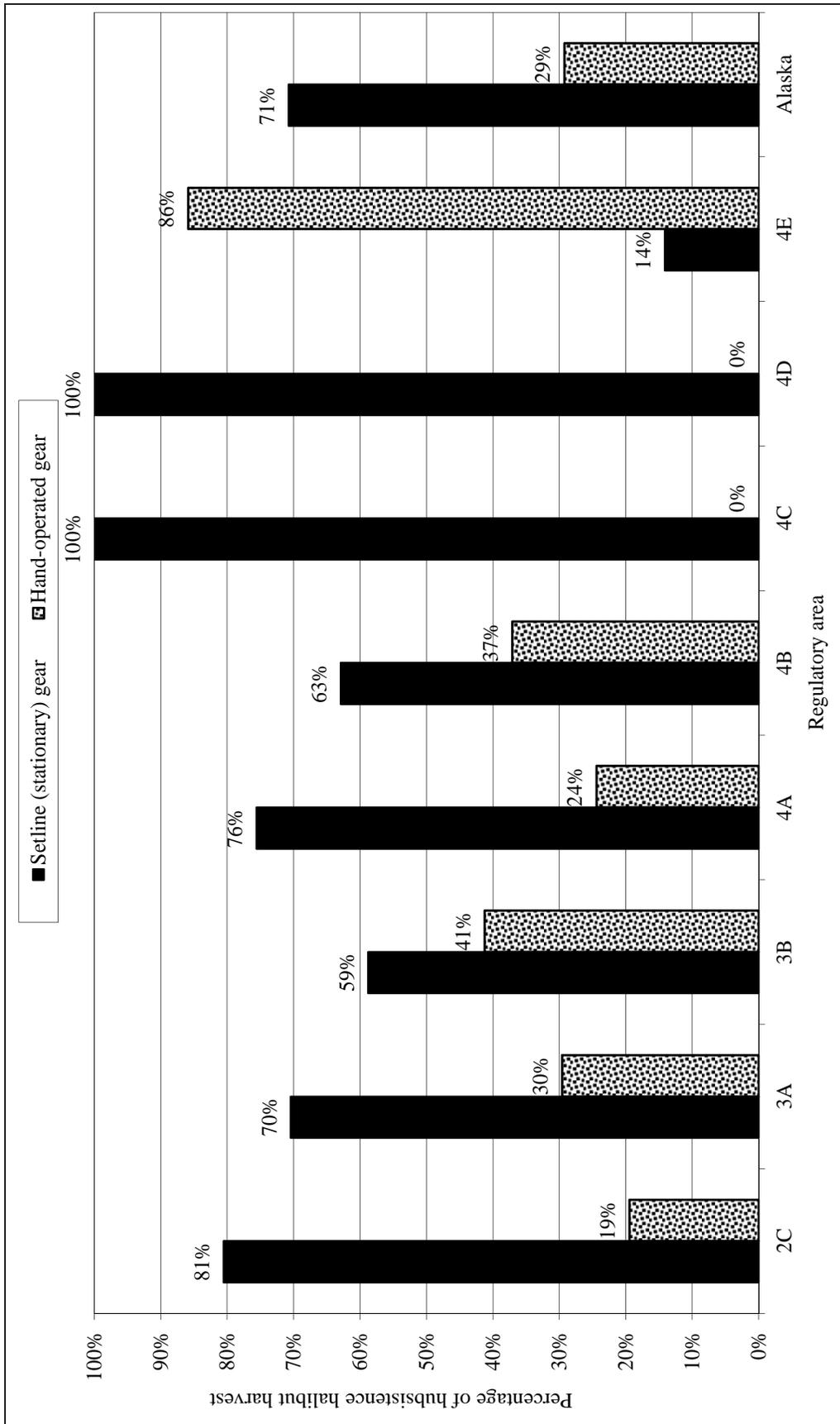


Figure 22.—Percentage of subsistence halibut harvest by gear type by regulatory area, 2014.

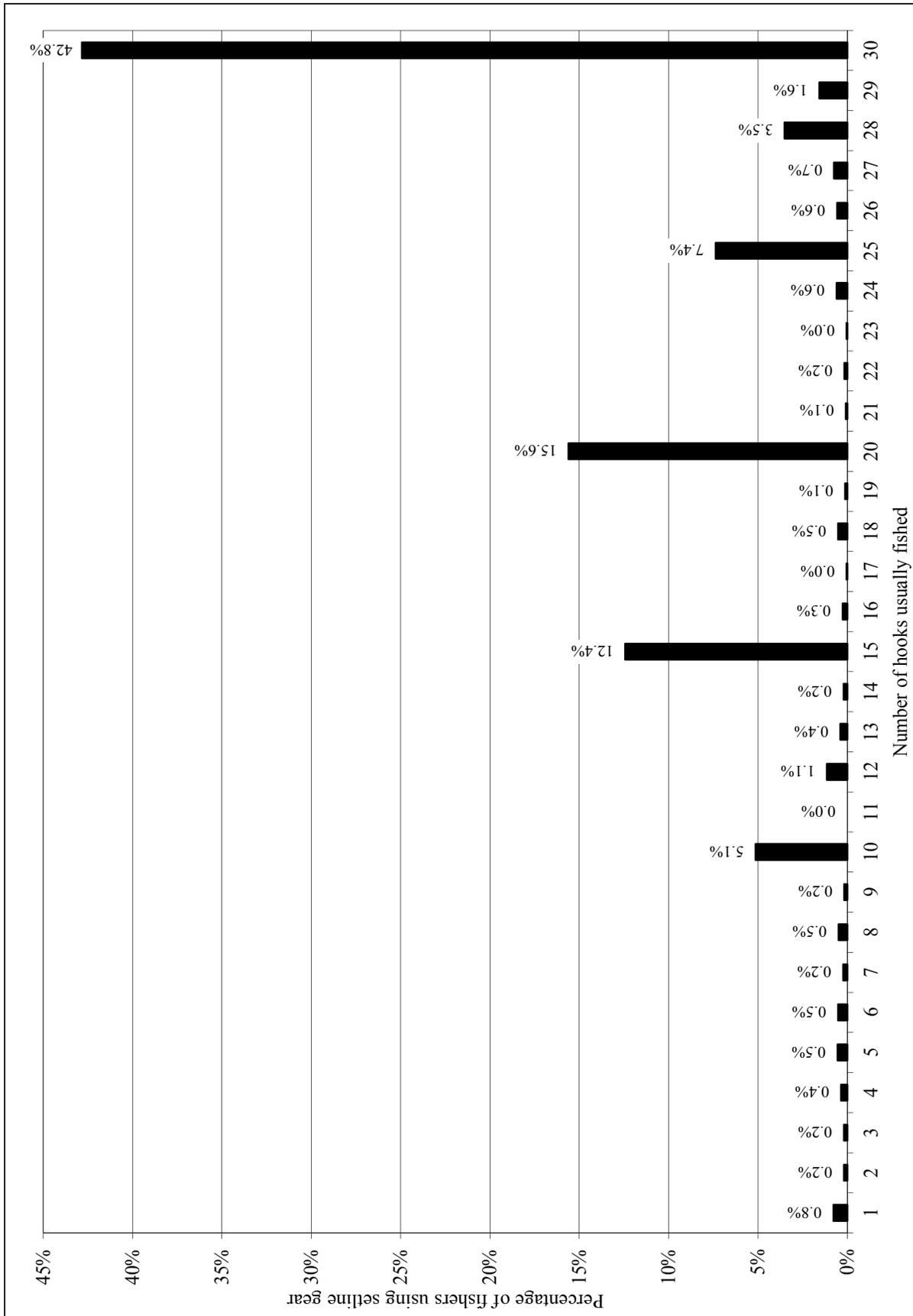


Figure 23.—Number of hooks usually fished, setline (stationary) gear, Alaska halibut subsistence fishery, 2014.

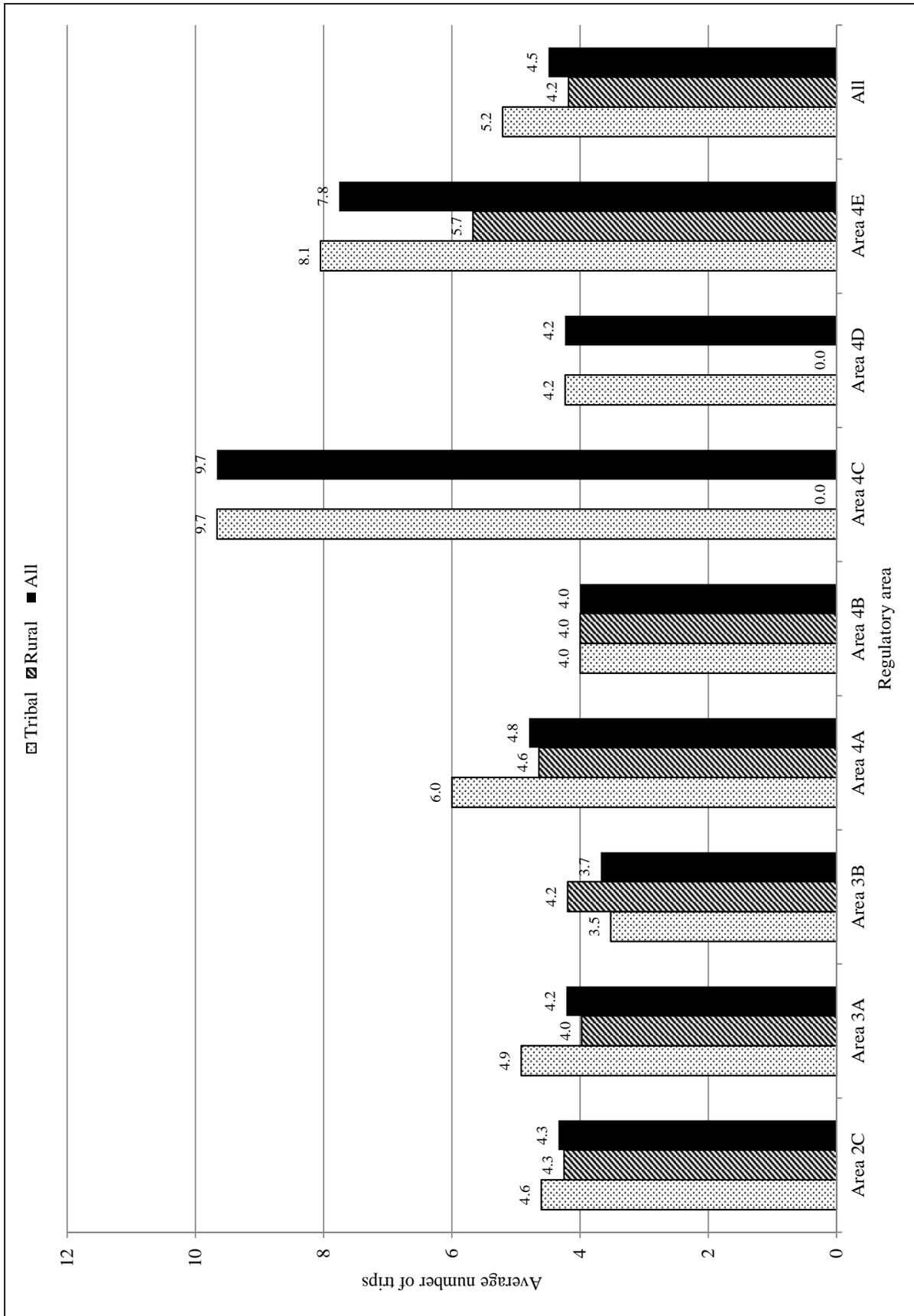


Figure 24. Average number of subsistence fishing trips for halibut by regulatory area and SHARC type, 2014.

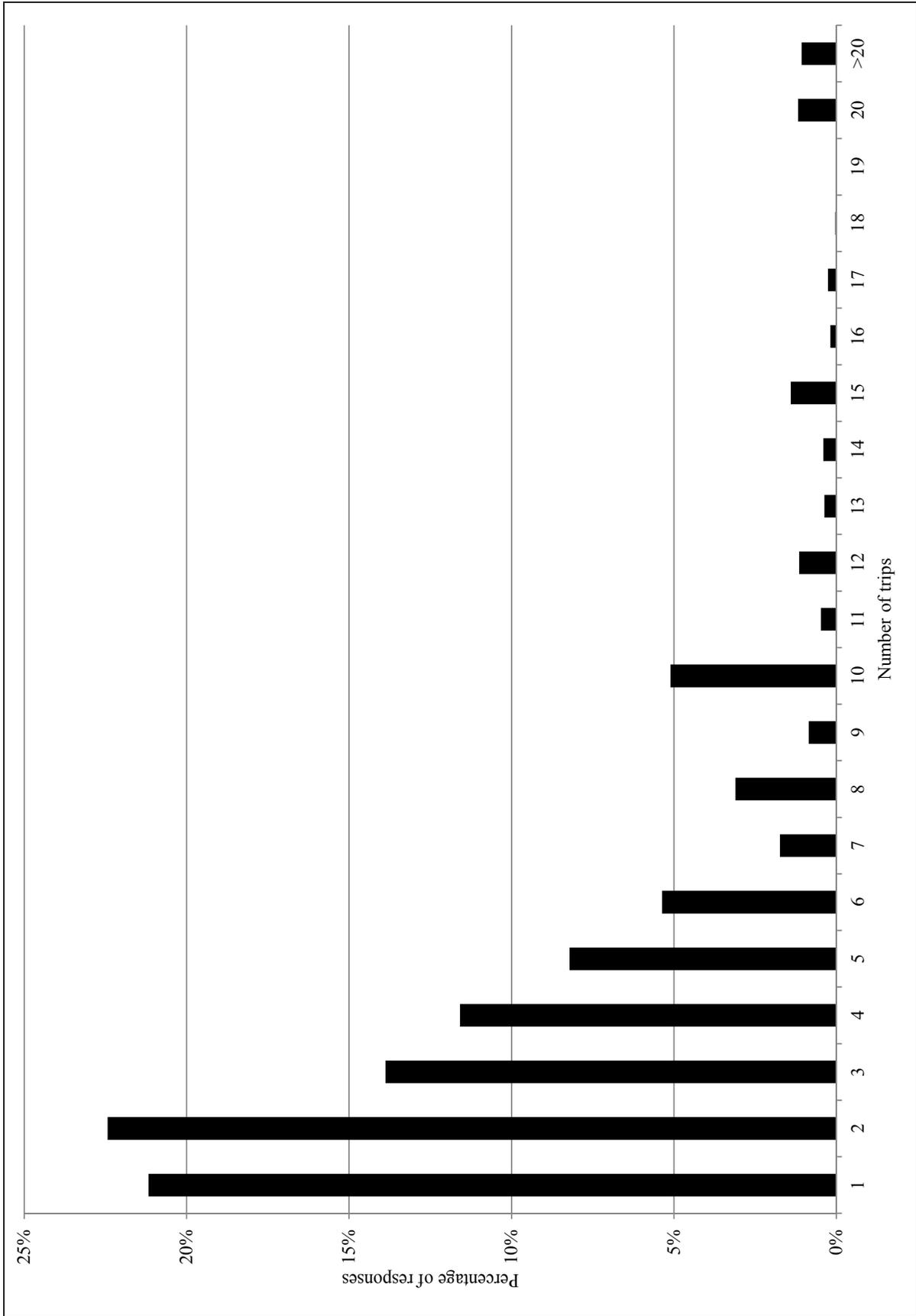


Figure 25.—Number of subsistence fishing trips for halibut, by percentage of total reported trips, 2014.

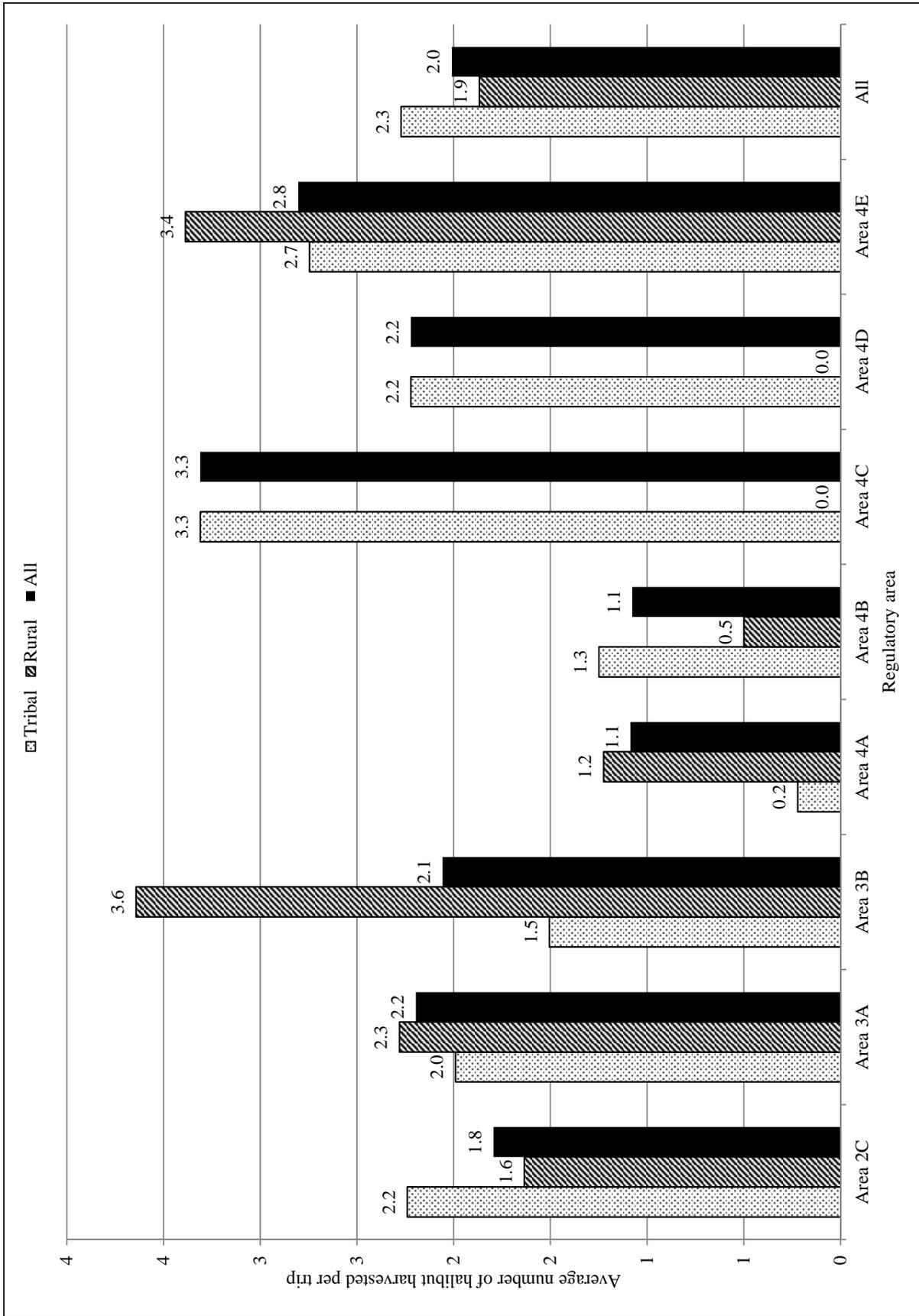


Figure 26.—Average number of halibut harvested per subsistence fishing trip by regulatory area and SHARC type, 2014.

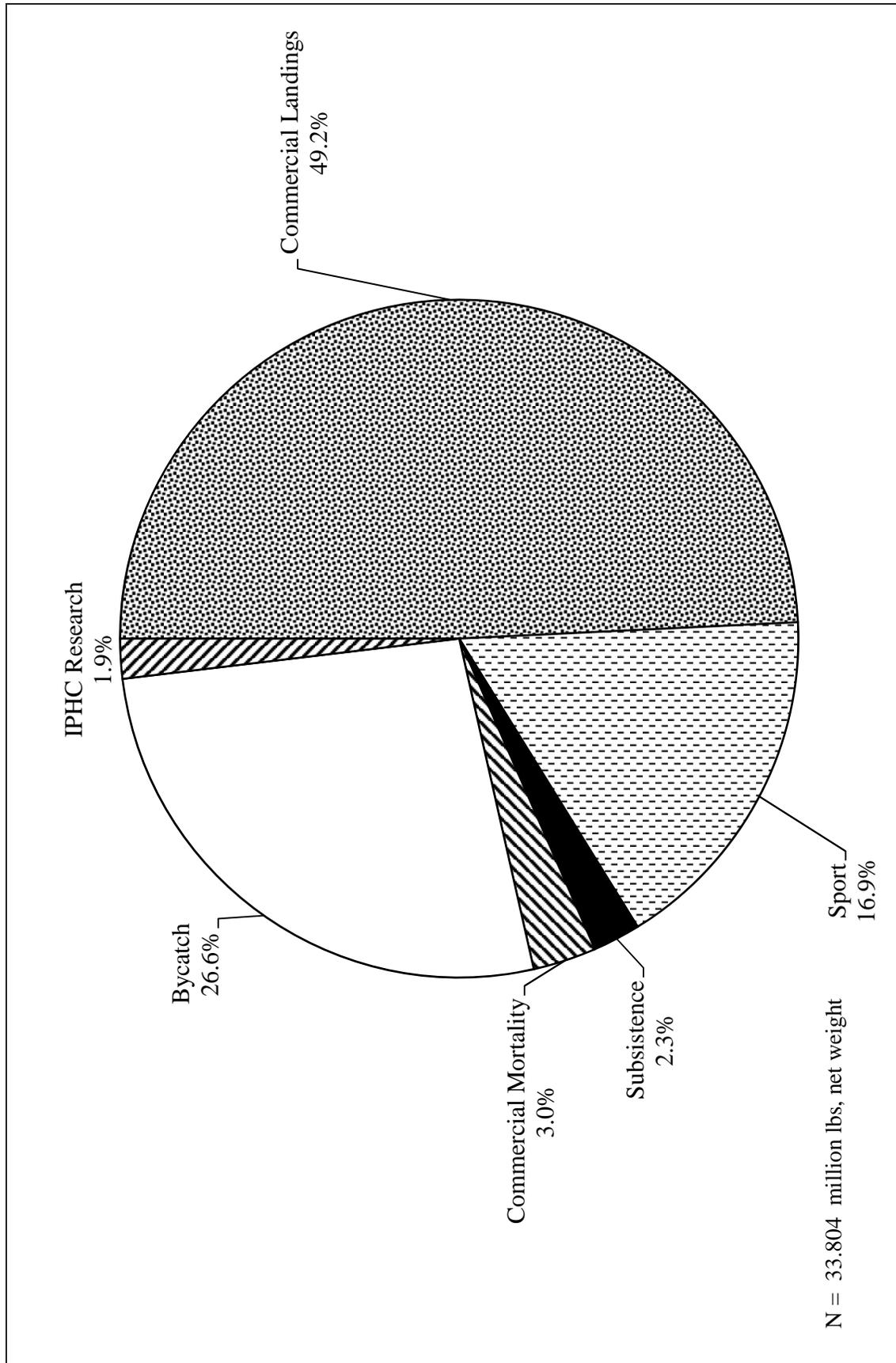


Figure 27. –Halibut removals, Alaska, 2014.

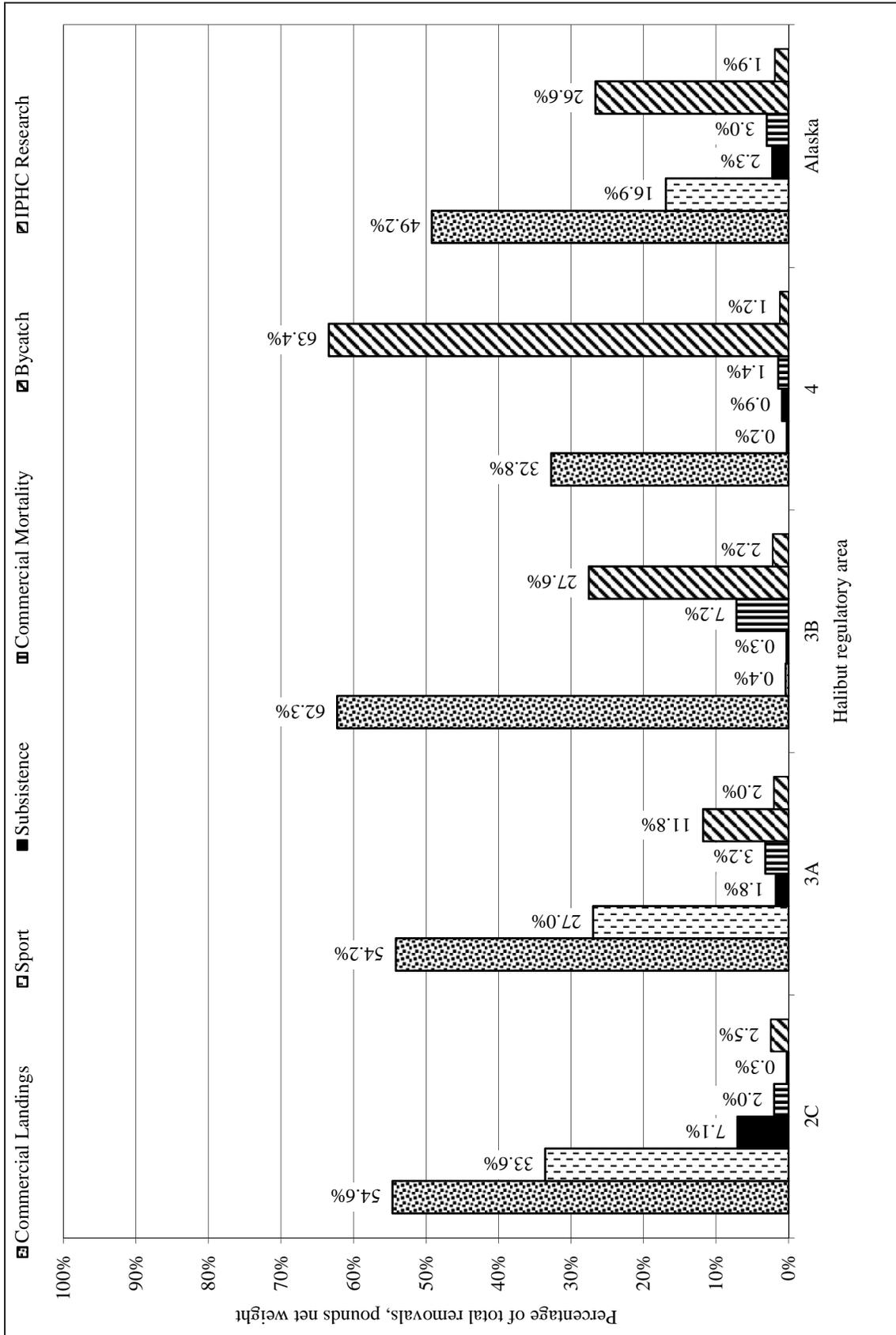


Figure 28.—Halibut removals in Alaska by regulatory area and removal category, 2014.

# APPENDICES

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)(i) 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
Thome 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

HALIBUT REGULATORY AREA 3A—  
Continued

Rural Community	Organized Entity
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
Diomed (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 Iqa) .....	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 Salamattof
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
	Gagan Toyagungin Tribe of Sand Point Village

HALIBUT REGULATORY AREA 4A		HALIBUT REGULATORY AREA 4E— Continued		HALIBUT REGULATORY AREA 4E— Continued	
Place with Tribal Headquarters	Organized Tribal Entity	Place with Tribal Headquarters	Organized Tribal Entity	Place with Tribal Headquarters	Organized Tribal Entity
Akutan .....	Native Village of Akutan	Elim .....	Native Village of Elim	Stebbins .....	Stebbins Community Association
Nikolski .....	Native Village of Nikolski	Emmonak .....	Chuloonawick Native Village	Teller .....	Native Village of Mary's Igloo
Unalaska .....	Qawalingin Tribe of Unalaska		Emmonak Village		Native Village of Teller
HALIBUT REGULATORY AREA 4B		Golovin .....	Chinik Eskimo Community	Togjak .....	Traditional Village of Togjak
		Goodnews Bay .....	Native Village of Goodnews Bay	Toksook Bay .....	Native Village of Toksook Bay
		Hooper Bay .....	Native Village of Hooper Bay	Tuntutuliak .....	Native Village of Tuntutuliak
Atka .....	Native Village of Atka		Native Village of Paimiut	Tununak .....	Native Village of Tununak
HALIBUT REGULATORY AREA 4C		King Salmon .....	King Salmon Tribal Council	Twin Hills .....	Twin Hills Village
		Kipnuk .....	Native Village of Kipnuk	Ugashik .....	Ugashik Village
		Kongiganak .....	Native Village of Kongiganak	Unalakleet .....	Native Village of Unalakleet
		Kotlik .....	Native Village of Hamilton	Wales .....	Native Village of Wales
St. George .....	Pribilof Islands Aleut Communities of St. Paul Island and St. George Island		Village of Bill Moore's Slough	White Mountain .....	Native Village of White Mountain
St. Paul .....		Koyuk .....	Village of Kotlik		
HALIBUT REGULATORY AREA 4D		Kwigillingok .....	Native Village of Kwigillingok		
		Levelock .....	Levelock Village		
		Manokotak .....	Manokotak Village		
		Mekoryak .....	Native Village of Mekoryak		
Gambell .....	Native Village of Gambell	Naknek .....	Naknek Native Village		
Savoonga .....	Native Village of Savoonga	Napakiak .....	Native Village of Napakiak		
Diomedes (Inalik) .....	Native Village of Diomedes (Inalik)	Napaskiak .....	Native Village of Napaskiak		
HALIBUT REGULATORY AREA 4E		Newtok .....	Newtok Village		
		Nightmute .....	Native Village of Nightmute		
			Umkumiute Native Village		
		Nome .....	King Island Native Community		
Alakanuk .....	Village of Alakanuk		Nome Eskimo Community		
Aleknagik .....	Native Village of Aleknagik	Oscarville .....	Oscarville Traditional Village		
Bethel .....	Orutsararmuit Native Village	Pilot Point .....	Native Village of Pilot Point		
Brevig Mission .....	Native Village of Brevig Mission	Platinum .....	Platinum Traditional Village		
Cheformak .....	Village of Cheformak	Port Heiden .....	Native Village of Port Heiden		
Chevak .....	Chevak Native Village	Quinhagak .....	Native Village of Quinhagak		
Clark's Point .....	Village of Clark's Point	Scammon Bay .....	Native Village of Scammon Bay		
Council .....	Native Village of Council	Shaktoolik .....	Native Village of Shaktoolik		
Dillingham .....	Native Village of Dillingham	Sheldon Point (Nuna Iqua) .....	Native Village of Sheldon's Point		
	Native Village of Eku	Shishmaref .....	Native Village of Shishmaref		
Eek .....	Native Village of Eek	Solomon .....	Village of Solomon		
Egegik .....	Egegik Village	South Naknek .....	South Naknek Village		
	Village of Kanatak	St. Michael .....	Native Village of Saint Michael		

(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.

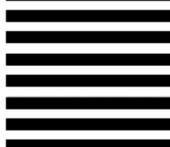
(2) The daily retention of subsistence halibut in rural areas is limited to no more than 20 fish per person eligible to conduct subsistence fishing for halibut under paragraph (g) of this section,

Appendix B.—Survey instrument.

<BARCODE>

Fold on the dotted lines to mail in your survey

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SUBSISTENCE DIVISION  
333 RASPBERRY RD  
ANCHORAGE AK 99518-9961



<BARCODE>



**INSTRUCTIONS FOR SUBSISTENCE HALIBUT HARVEST SURVEY, 2014**

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

**Question 1.**

- Mark “yes” even if you fished but were unsuccessful

**Questions 2 and 3.**

- 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 4.**

- 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 5 and 6.**

- 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](mailto:dfg.sub.halibut@alaska.gov).

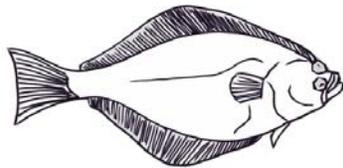
**THANK YOU FOR PARTICIPATING IN THIS SURVEY!**

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 2014**  
**ALASKA DEPARTMENT OF FISH & GAME/DIVISION OF SUBSISTENCE**  
**& NATIONAL MARINE FISHERIES SERVICE**



**2**  
**0**  
**1**  
**4**

## 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](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](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 RESPONSES 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](mailto:subsistence_halibut@fishgame.state.ak.us)**

## **APPENDIX D.—ADDITIONAL TABLES**

Table D-1.—Estimated subsistence harvests of halibut by gear type, tribe, and rural community, 2014.

Tribal Name	Regulatory Area	Number of SHARC's 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	Estimated Pounds Halibut Harvested			
Angoon Community Association	2C	77	28	383	6,489	11	76	1,073	28	459	7,561	53.0%	4,923	32.1%
Central Council Tlingit and Haida Indian Tribes	2C	460	108	799	14,870	56	379	6,651	139	1,178	21,521	36.2%	2,521	30.1%
Chilkat Indian Village	2C	11	1	1	67	0	0	0	1	1	67	123.5%	67	123.5%
Chilkoot Indian Association	2C	44	14	93	3,732	2	2	1,080	16	95	3,833	58.4%	8,189	79.6%
Craig Community Association	2C	43	22	140	7,109	15	54	1,080	26	194	8,189	41.6%	0	0.0%
Douglas Indian Association	2C	7	0	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Hoonah Indian Association	2C	114	29	543	10,813	29	238	4,163	50	781	14,976	51.4%	1,476	45.0%
Hydaburg Cooperative Association	2C	74	25	230	8,256	13	21	894	30	252	9,150	36.0%	29,249	33.5%
Keichikan Indian Corporation	2C	480	101	1,186	21,100	54	539	8,149	136	1,725	29,249	37.3%	29,249	32.9%
Klawock Cooperative Association	2C	66	22	275	10,106	2	2	66	22	277	10,172	56.2%	4,191	73.8%
Methakala Indian Community, Annette Island Reserve	2C	148	30	134	3,125	16	32	1,066	39	166	4,191	42.6%	6,912	33.4%
Organized Village of Kaik	2C	83	28	249	6,284	9	23	628	30	272	6,912	29.7%	180	304.2%
Organized Village of Suxman	2C	25	6	13	180	3	3	94	2	8	304.2%	208.5%	164	208.5%
Petersburg Indian Association	2C	61	17	177	2,170	17	102	1,303	24	279	3,474	37.6%	3,474	35.1%
Sitka Tribe of Alaska	2C	251	75	780	13,852	23	64	1,243	77	844	15,095	43.6%	15,095	25.0%
Skegway Village	2C	2	2	169	3,653	17	56	1,270	33	225	4,923	31.5%	4,923	32.1%
Wrangell Cooperative Association	2C	79	30	169	3,653	17	56	1,270	33	225	4,923	31.5%	4,923	32.1%
<b>Subtotal, Area 2C</b>		<b>2,031</b>	<b>538</b>	<b>5,180</b>	<b>111,875</b>	<b>269</b>	<b>1,605</b>	<b>27,872</b>	<b>657</b>	<b>6,785</b>	<b>139,747</b>	<b>14.0%</b>	<b>139,747</b>	<b>12.7%</b>
Kenaietle Indian Tribe	3A	115	11	83	1,210	4	93	1,182	15	176	2,393	63.3%	2,393	66.6%
Lesnoi Village (Woody Island)	3A	34	7	77	1,704	5	7	114	11	84	1,819	66.7%	1,819	64.7%
Native Village of Afognak	3A	16	6	33	595	6	22	404	9	55	64.9%	998	51.9%	
Native Village of Akhiok	3A	21	0	0	0	19	71	2,079	19	71	33.1%	2,079	43.6%	
Native Village of Chenega	3A	19	8	65	1,900	3	11	416	10	76	53.1%	2,316	48.6%	
Native Village of Eyak	3A	21	195	3,119	10,599	10	66	1,059	23	261	4,177	41.7%	4,177	42.5%
Native Village of Karluk	3A	8	0	0	0	8	38	1,092	8	38	52.5%	1,092	31.2%	
Native Village of Larsen Bay	3A	38	5	51	950	15	109	1,625	15	160	79.4%	2,575	75.4%	
Native Village of Nanwalek	3A	73	9	215	4,708	12	96	1,748	16	311	151.9%	6,456	169.8%	
Native Village of Ozumkie	3A	26	16	148	3,442	8	29	351	18	177	78.9%	3,793	97.3%	
Native Village of Port Graham	3A	36	11	103	1,748	10	54	670	15	157	58.9%	2,418	66.8%	
Native Village of Port Lions	3A	32	11	75	1,785	12	51	1,233	25	125	3,018	19.7%	3,018	23.0%
Native Village of Tatitlek	3A	22	7	42	1,288	2	1	38	8	44	63.4%	1,326	63.0%	
Nimichik Village	3A	56	4	32	279	10	190	2,400	12	222	65.5%	2,679	62.6%	
Seldovia Village Tribe	3A	18	18	272	3,840	12	77	1,144	25	349	32.2%	4,984	34.1%	
Sun'Ag Tribe of Kodiak (formerly Shoonaq)	3A	102	57	370	6,551	15	52	1,071	59	422	34.3%	7,622	33.1%	
Village of Kanatak	3A	17	0	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Village of Old Harbor	3A	35	7	47	419	13	35	1,069	17	82	1,488	56.3%	1,488	45.5%
Village of Saliamaotof	3A	24	0	0	0	12	289	3,505	12	289	26.0%	3,505	27.3%	
Yakutat Tlingit Tribe	3A	42	26	259	5,612	4	23	564	28	282	6,177	26.8%	6,177	32.5%
<b>Subtotal, Area 3A</b>		<b>831</b>	<b>233</b>	<b>2,067</b>	<b>39,150</b>	<b>179</b>	<b>1,314</b>	<b>21,763</b>	<b>345</b>	<b>3,381</b>	<b>60,913</b>	<b>14.0%</b>	<b>60,913</b>	<b>15.2%</b>
Agdaagux Tribe of King Cove	3B	43	14	94	1,576	13	76	1,101	22	170	2,678	13.3%	2,678	14.2%
Chignik Lake Village	3B	13	9	0	0	9	0	0	9	0	0	0.0%	0	0.0%
Ivanoff Bay Village	3B	5	0	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Native Village of Belkofski	3B	6	2	0	0	0	0	0	2	0	0	0.0%	0	0.0%
Native Village of Chignik	3B	2	0	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Native Village of Chignik Lagoon	3B	13	3	9	163	6	35	423	7	43	585	50.0%	585	60.1%
Native Village of False Pass	3B	2	0	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Native Village of Nelson Lagoon	3B	2	0	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Native Village of Perryville	3B	7	6	31	777	3	3	26	6	34	803	70.1%	803	69.8%
Native Village of Unga	3B	7	4	25	386	1	15	225	4	40	611	0.0%	611	0.0%
Pautoff Harbor Village	3B	70	17	34	609	13	28	672	24	62	1,281	31.2%	1,281	37.7%
Qagan Toyagungin Tribe of Sand Point Village	3B	77	12	118	1,176	22	100	1,511	33	217	2,687	26.3%	2,687	21.1%
<b>Subtotal, Area 3B</b>		<b>247</b>	<b>68</b>	<b>326</b>	<b>5,000</b>	<b>68</b>	<b>261</b>	<b>4,042</b>	<b>111</b>	<b>587</b>	<b>9,041</b>	<b>18.2%</b>	<b>9,041</b>	<b>15.1%</b>
Native Village of Akutan	4A	9	0	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Qawalineq Tribe of Unalaska	4A	23	8	5	77	3	5	58	8	10	134	119.0%	134	120.6%
<b>Subtotal, Area 4A</b>		<b>32</b>	<b>8</b>	<b>5</b>	<b>77</b>	<b>3</b>	<b>5</b>	<b>58</b>	<b>8</b>	<b>10</b>	<b>134</b>	<b>98.5%</b>	<b>134</b>	<b>99.6%</b>
Native Village of Akta	4B	5	0	0	0	0	0	0	0	0	0	0.0%	0	0.0%
<b>Subtotal, Area 4B</b>		<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>
Pribilof Islands Aleut Community of St George	4C	4	4	447	3,457	4	46	868	15	494	4,325	130.9%	4,325	101.6%
Pribilof Islands Aleut Community of St Paul	4C	27	12	447	3,457	4	46	868	15	494	4,325	129.3%	4,325	102.0%
<b>Subtotal, Area 4C</b>		<b>31</b>	<b>12</b>	<b>447</b>	<b>3,457</b>	<b>4</b>	<b>46</b>	<b>868</b>	<b>15</b>	<b>494</b>	<b>4,325</b>	<b>129.3%</b>	<b>4,325</b>	<b>102.0%</b>

-continued-

Tribal Name	Regulatory Area	Number of SHARCs Issued <sup>f</sup>	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	Estimated Pounds of Halibut	
Native Village of Diomedes (Inalik)	4D	1										
Native Village of Savoonga	4D	6										
<b>Subtotal, Area 4D</b>		<b>7</b>	<b>2</b>	<b>10</b>	<b>174</b>	<b>1</b>	<b>22</b>	<b>405</b>	<b>3</b>	<b>32</b>	<b>459</b>	<b>97.5%</b>
Chevuk Native Village (Kashuanamut)	4E	1										
Chinik Eskimo Community	4E	1										
Egegik Village	4E	4										
King Island Native Community	4E	2										
King Salmon Tribal Council	4E	1										
Mankotak Village	4E	1										
Naknek Native Village	4E	4										
Native Village of Akknagik	4E	3										
Native Village of Council	4E	4										
Native Village of Dillingham (Curyung)	4E	7	2	5	113	2	7	126	2	12	239	208.3%
Native Village of Esk	4E	8	1	0	0	4	29	758	5	29	758	73.8%
Native Village of Hooper Bay	4E	1										
Native Village of Kanaknak	4E	1										
Native Village of Kipruk	4E	4										
Native Village of Kongiganak	4E	5										
Native Village of Koyuk	4E	1										
Native Village of Kwigillingok	4E	1										
Native Village of Kwihingak	4E	5										
Native Village of Mskoryuk	4E	4										
Native Village of Nightmute	4E	1										
Native Village of Scammon Bay	4E	2										
Native Village of Shaktoolik	4E	1										
Native Village of Taksokok Bay	4E	114	0	0	0	113	2,303	30,480	113	2,303	30,480	11.6%
Native Village of Tununak	4E	70	5	520	3,644	69	1,622	20,424	70	2,142	24,068	17.3%
Native Village of Unalakleet	4E	1										
Newtok Village	4E	1										
Nome Eskimo Community	4E	1										
Onusaramut Native Village	4E	8	0	0	0	4	20	540	4	20	540	1100.4%
Platinum Traditional Village	4E	8	0	0	0	5	0	0	5	0	0	0.0%
South Naknek Village	4E	1										
Traditional Village of Togiak	4E	1										
Village of Alakanuk	4E	1										
Village of Chorfruk	4E	6	0	0	0	6	144	1,955	6	144	1,955	633.9%
Village of Clark's Point	4E	2										
<b>Subtotal, Area 4E</b>		<b>276</b>	<b>10</b>	<b>546</b>	<b>3,957</b>	<b>213</b>	<b>4,246</b>	<b>55,905</b>	<b>217</b>	<b>4,791</b>	<b>59,862</b>	<b>12.8%</b>
<b>Tribal subtotal</b>		<b>3,460</b>	<b>874</b>	<b>8,395</b>	<b>163,965</b>	<b>738</b>	<b>7,501</b>	<b>110,987</b>	<b>1,359</b>	<b>16,096</b>	<b>274,952</b>	<b>8.1%</b>

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Rural Community	Regulatory Area	Number of SHARCs Issued <sup>f</sup>	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	Estimated Pounds Halibut Harvested			
Angoon	2C	17	6	117	1,434	6	164	1,618	11	281	3,052	89.1%	3,052	74.9%
Coffman Cove	2C	46	12	63	1,320	11	52	985	19	115	2,305	19.9%	2,305	19.2%
Craig	2C	282	120	823	18,367	43	274	4,372	136	1,098	22,739	9.4%	22,739	9.0%
Edna Bay	2C	30	17	83	2,943	0	0	0	17	83	2,943	26.2%	2,943	21.9%
Elfin Cove	2C	9	4	23	559	3	9	366	4	32	926	70.1%	926	74.2%
Gustavus	2C	62	27	226	4,767	18	96	2,847	34	322	7,614	16.0%	7,614	17.0%
Haines	2C	400	215	1,318	25,847	48	102	2,216	225	1,420	28,064	8.0%	28,064	9.1%
Hollis	2C	30	14	94	2,166	4	43	564	16	137	2,531	32.3%	2,531	31.4%
Hoonah	2C	82	37	322	5,659	18	76	874	45	398	6,533	15.9%	6,533	21.7%
Hydaburg	2C	8	8	92	3,000	0	0	0	8	92	3,000	42.7%	3,000	50.1%
Hyder	2C	27	18	81	1,893	8	5	75	18	86	1,968	31.4%	1,968	25.0%
Juneau	2C	11	2	0	0	6	83	1,650	6	86	1,650	132.6%	1,650	111.9%
Kake	2C	41	15	143	3,442	5	40	903	19	183	4,345	44.9%	4,345	31.7%
Kasaan	2C	8	5	19	684	3	3	114	5	22	798	104.1%	798	94.7%
Ketchikan	2C	28	8	28	789	10	60	921	14	88	1,710	51.9%	1,710	46.6%
Klawock	2C	128	42	369	7,953	28	257	3,373	58	627	11,326	20.2%	11,326	25.2%
Klukwan	2C	1												
Metlakatla	2C	20	7	31	886	4	2	8	9	33	895	80.1%	895	82.9%
Meyers Chuck	2C	9	7	28	819	0	0	0	7	28	819	27.1%	819	25.5%
Naikai Bay	2C	44	26	158	5,971	15	47	1,556	31	205	7,526	39.2%	7,526	44.6%
Pelican	2C	32	17	50	1,336	6	10	313	18	60	1,649	29.4%	1,649	30.4%
Petersburg	2C	781	265	1,562	30,640	166	740	12,386	341	2,302	43,026	7.4%	43,026	6.7%
Point Baker	2C	11	6	32	673	0	0	0	6	32	673	62.6%	673	57.2%
Port Alexander	2C	19	12	81	1,449	3	2	55	12	83	1,504	13.8%	1,504	13.1%
Port Protection	2C	10	10	56	1,144	3	4	86	10	60	1,230	49.5%	1,230	46.3%
Saxman	2C	3												
Sitka	2C	1,285	531	2,960	69,361	163	494	8,925	573	3,454	78,286	6.8%	78,286	6.8%
Skagway	2C	64	27	63	1,445	15	17	541	29	80	1,986	17.6%	1,986	18.9%
Tenakee Springs	2C	48	26	124	2,487	9	36	553	29	160	5,040	15.0%	5,040	14.2%
Thome Bay	2C	119	48	271	6,696	23	71	1,591	57	342	8,087	16.5%	8,087	16.2%
Ward Cove	2C	4												
Whale Pass	2C	12	3	56	591	3	11	281	6	66	872	92.6%	872	58.2%
Wrangell	2C	404	202	1,368	26,779	104	550	9,432	242	1,919	36,212	7.9%	36,212	7.3%
<b>Subtotal, Area 2C</b>		<b>4,075</b>	<b>1,737</b>	<b>10,661</b>	<b>231,652</b>	<b>725</b>	<b>3,292</b>	<b>56,768</b>	<b>2,006</b>	<b>13,954</b>	<b>288,421</b>	<b>3.2%</b>	<b>288,421</b>	<b>3.2%</b>
Abikok	3A	31	5	47	924	7	55	882	10	103	1,806	61.7%	1,806	60.9%
Anchorage	3A	1												
Chenega Bay	3A	7	4	63	1,068	5	23	714	5	86	1,782	69.6%	1,782	45.5%
Chinak	3A	9	7	53	928	1	3	63	7	56	991	26.8%	991	26.0%
Cordova	3A	397	157	1,068	18,237	87	370	8,269	176	1,438	26,506	11.0%	26,506	14.7%
Homer	3A	3												
Kodiak	3A	1,251	586	4,507	80,279	301	1,334	27,399	691	5,841	107,678	6.8%	107,678	7.0%
Larsen Bay	3A	4												
Nanwalek	3A	3												
Old Harbor	3A	5												
Ouzinkie	3A	7	6	31	746	1	3	32	7	34	777	35.8%	777	54.9%
Port Graham	3A	6	2	25	555	1	15	225	2	40	780	0.0%	780	0.0%
Port Lions	3A	16	2	12	210	2	12	128	4	24	338	109.5%	338	113.7%
Seldovia	3A	120	48	490	7,978	40	512	6,415	68	1,001	14,393	18.2%	14,393	19.0%
Tautlet	3A	10	8	42	1,133	4	8	336	8	50	1,469	85.1%	1,469	88.9%
Valdez	3A	1												
Yakutat	3A	58	22	156	3,208	8	41	712	26	197	3,919	24.6%	3,919	25.4%
<b>Subtotal, Area 3A</b>		<b>1,929</b>	<b>887</b>	<b>6,780</b>	<b>124,305</b>	<b>466</b>	<b>2,436</b>	<b>46,130</b>	<b>1,016</b>	<b>9,216</b>	<b>170,435</b>	<b>6.4%</b>	<b>170,435</b>	<b>9.1%</b>
Cold Bay	3B	23	15	174	3,527	6	5	67	15	179	3,594	25.0%	3,594	28.8%
False Pass	3B	3												
King Cove	3B	19	6	58	1,159	10	87	1,520	11	145	2,678	0.0%	2,678	0.0%
Sand Point	3B	6	1	140	2,100	2	5	75	3	145	2,175	0.0%	2,175	0.0%
<b>Subtotal, Area 3B</b>		<b>51</b>	<b>24</b>	<b>387</b>	<b>7,247</b>	<b>21</b>	<b>108</b>	<b>2,050</b>	<b>32</b>	<b>494</b>	<b>9,296</b>	<b>23.1%</b>	<b>9,296</b>	<b>20.0%</b>
Akun	4A	1												
Dutch Harbor	4A	28	8	41	1,298	8	18	296	10	59	1,594	88.5%	1,594	105.6%
Unalaska	4A	105	36	210	3,759	32	178	2,708	51	290	5,468	22.8%	5,468	23.1%
<b>Subtotal, Area 4A</b>		<b>134</b>	<b>44</b>	<b>251</b>	<b>5,057</b>	<b>40</b>	<b>98</b>	<b>2,004</b>	<b>61</b>	<b>349</b>	<b>7,062</b>	<b>23.5%</b>	<b>7,062</b>	<b>23.5%</b>
Adak	4B	2												
<b>Subtotal, Area 4B</b>		<b>2</b>												

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Rural Community	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	Estimated Pounds Halibut Harvested	Estimated Number Respondents Fished	Estimated Number Halibut Harvested	Estimated Pounds Halibut Harvested	Confidence Interval for Pounds of Halibut
St Paul Island	4C	2													
<b>Subtotal, Area 4C</b>		<b>2</b>													
Savoonga	4D	1													
<b>Subtotal, Area 4D</b>		<b>1</b>													
Alakanuk	4E	1													
Behel	4E	1													
Chevak	4E	1													
Dillingham	4E	13													
Egegik	4E	1													
King Salmon	4E	2													
Koyuk	4E	1													
Manokotak	4E	1													
Mekoryuk	4E	15													
Niknek	4E	3													
Nome	4E	13													
Pilot Point	4E	1													
Port Heiden	4E	1													
Tununak	4E	10													
Unalakleet	4E	1													
<b>Subtotal, Area 4E</b>		<b>65</b>													
<b>Rural community subtotal</b>		<b>6,259</b>													
Tribal Subtotal	All	3,460													
Rural Community Subtotal	All	6,259													
<b>Total</b>		<b>9,719</b>													
			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	Estimated Pounds Halibut Harvested	Estimated Number Respondents Fished	Estimated Number Halibut Harvested	Estimated Pounds Halibut Harvested	Confidence Interval for Pounds of Halibut
			2,276	15,841	343,528	994	4,898	84,640	2,663	20,739	428,168	2,663	20,739	428,168	3.8%
	2C	6,106	1,090	8,847	163,455	644	3,750	67,893	1,361	12,597	231,348	1,361	12,597	231,348	8.1%
	3A	2,760	92	713	12,246	90	368	6,092	143	1,081	18,338	143	1,081	18,338	16.8%
	3B	298	52	256	5,134	42	103	2,062	69	359	7,196	69	359	7,196	26.1%
	4A	166	4	15	313	2	3	75	4	19	388	4	19	388	63.5%
	4B	7	12	447	3,457	4	46	868	15	494	4,325	15	494	4,325	109.7%
	4C	33	2	10	174	1	22	405	3	32	579	3	32	579	96.3%
	4D	8	22	732	9,708	235	4,646	60,420	247	5,378	70,128	247	5,378	70,128	13.0%
	4E	341	<b>3,550</b>	<b>26,863</b>	<b>538,015</b>	<b>2,012</b>	<b>13,836</b>	<b>222,455</b>	<b>4,506</b>	<b>40,698</b>	<b>760,469</b>	<b>4,506</b>	<b>40,698</b>	<b>760,469</b>	<b>3.5%</b>

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCS issued are not reported in this table. Subtotals include all tribes and communities. Includes potential fishers in Sand Point, King Cove, Toksook Bay, and Tununak who did not hold SHARCS in 2014. Blank cells indicate redacted data.

Table D-2.—Estimated subsistence harvests of halibut by place of residence, 2014.

City	State	Number of SHARCs Issued <sup>a</sup>	Subsistence Fished			Subsistence Harvest			Sport Fished			Sport Harvest		
			Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut
Adak	AK	6	1	2	38	1	5	53						
Akhiok	AK	20	21	75	2,195	0	0	0						
Akutan	AK	5												
Alakanuk	AK	1												
Anchor Point	AK	12	9	186	2,707	2	24	335						
Anchorage	AK	157	38	268	6,200	20	57	1,320						
Angoon	AK	105	45	805	12,210	8	8	186						
Auke Bay	AK	4												
Barrow	AK	2												
Bethel	AK	9	6	13	400	0	0	0						
Big Lake	AK	1												
Cheformak	AK	3												
Chenega Bay	AK	10	6	109	2,316	3	12	109						
Chevak	AK	1												
Chignik	AK	3												
Chignik Lagoon	AK	7	3	25	238	0	0	0						
Chignik Lake	AK	4												
Chiniak	AK	14	10	64	1,284	2	6	135						
Chugiak	AK	4												
Clarks Point	AK	2												
Coffman Cove	AK	45	18	105	2,034	23	109	2,267						
Cold Bay	AK	28	18	212	4,436	7	15	241						
Cordova	AK	450	197	1,722	31,204	95	246	4,827						
Craig	AK	393	200	1,547	35,170	111	492	7,642						
Dillingham	AK	17	3	14	241	4	7	161						
Douglas	AK	18	4	45	749	7	38	673						
Dutch Harbor	AK	66	25	139	3,543	21	82	1,485						
Eagle River	AK	10	5	58	540	0	0	0						
Edna Bay	AK	25	16	68	2,619	2	4	153						
Eek	AK	6	4	16	358	0	0	0						
Egegik	AK	1												

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Table D-2.-Page 2 of 4

City	State	Number of SHARCs Issued <sup>a</sup>	Subsistence Fished			Subsistence Harvest			Sport Fished			Sport Harvest		
			Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut
Elfin Cove	AK	10	4	32	926	0	0	0	0	0	0	0	0	
Fairbanks	AK	5												
False Pass	AK	1												
Fritz Creek	AK	1												
Girdwood	AK	1												
Glennallen	AK	1												
Gustavus	AK	60	33	310	7,394	18	75	1,531						
Haines	AK	449	235	1,498	30,859	66	101	2,414						
Hollis	AK	3												
Homer	AK	37	13	81	1,419	5	9	110						
Hoonah	AK	188	92	1,175	21,369	49	218	3,554						
Hydaburg	AK	78	37	317	11,577	1	1	40						
Hyder	AK	27	18	86	1,968	9	8	149						
Juneau	AK	325	88	702	13,608	83	509	9,419						
Kake	AK	112	44	357	9,834	19	76	1,515						
Karluk	AK	6	8	38	1,092	6	16	632						
Kasaan	AK	11	3	21	738	2	0	0						
Kasilof	AK	11	6	114	2,249	2	16	180						
Kenai	AK	88	16	280	3,413	5	12	226						
Ketchikan	AK	546	171	2,217	37,213	160	820	13,191						
King Cove	AK	63	32	293	5,047	9	34	551						
Kipnuk	AK	3												
Klawock	AK	192	90	1,045	26,580	51	280	4,713						
Kodiak	AK	1,375	763	6,401	118,123	460	1,731	31,744						
Kongiganak	AK	4												
Kwigillingok	AK	1												
Larsen Bay	AK	36	17	147	2,183	7	31	593						
Manokotak	AK	3												
Mekoryuk	AK	18	13	258	6,739	0	0	0						
Metlakatla	AK	163	46	165	4,203	23	56	1,552						

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Table D-2.-Page 3 of 4

City	State	Number of SHARCs Issued <sup>a</sup>	Subsistence Fished			Subsistence Harvest			Sport Fished			Sport Harvest		
			Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut
Meyers Chuck	AK	9	7	28	819	0	0	0	0	0	0	0	0	
Naknek	AK	6	2	4	75	1	1	1	1	1	1	29	29	
Nanwalek	AK	75	19	522	14,301	1	1	1	1	1	1	8	8	
Naukatik Bay	AK	24	15	85	2,980	8	8	30	30	30	30	517	517	
Nelson Lagoon	AK	1	0	0	0	0	0	0	0	0	0	0	0	
Nikiski	AK	7	0	0	0	0	0	0	0	0	0	0	0	
Nimilchik	AK	22	4	22	404	8	8	30	30	30	30	453	453	
Nome	AK	16	5	37	598	0	0	0	0	0	0	0	0	
North Pole	AK	2												
Old Harbor	AK	35	18	153	2,094	7	7	23	23	23	23	413	413	
Ouzinkie	AK	24	22	127	2,351	7	7	16	16	16	16	152	152	
Palmer	AK	8	2	6	238	1	1	24	24	24	24	420	420	
Pelican	AK	37	30	104	3,483	13	13	125	125	125	125	2,667	2,667	
Perryville	AK	5												
Petersburg	AK	863	375	2,677	48,375	242	242	992	992	992	992	16,021	16,021	
Point Baker	AK	14	8	63	1,271	4	4	7	7	7	7	98	98	
Port Alexander	AK	20	11	90	1,756	5	5	13	13	13	13	352	352	
Port Graham	AK	34	15	168	2,585	5	5	11	11	11	11	155	155	
Port Heiden	AK	1												
Port Lions	AK	39	24	128	2,926	17	17	43	43	43	43	729	729	
Port Protection	AK	1												
Quinhagak	AK	5												
Saint George Island	AK	2												
Saint Paul Island	AK	27	17	504	4,500	0	0	0	0	0	0	0	0	
Sand Point	AK	139	64	440	6,387	3	3	0	0	0	0	0	0	
Savoonga	AK	6	1	2	54	0	0	0	0	0	0	0	0	
Saxman	AK	3												
Seldovia	AK	140	75	1,100	15,653	43	43	236	236	236	236	3,214	3,214	
Seward	AK	10	1	22	405	1	1	6	6	6	6	108	108	
Sitka	AK	1,530	644	4,273	91,109	262	262	793	793	793	793	14,900	14,900	

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Table D-2.-Page 4 of 4

City	State	Number of SHARCs Issued <sup>a</sup>	Subsistence Fished			Subsistence Harvest			Sport Fished			Sport Harvest		
			Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut	Estimated Number Respondents	Estimated Number Halibut	Estimated Pounds Halibut
Skagway	AK	68	30	90	1,771	22	67	1,231						
Soldotna	AK	43	10	156	1,920	10	29	391						
Sterling	AK	5												
Tatitlek	AK	19	10	55	2,000	2	0	0						
Teller	AK	1												
Tenakee Springs	AK	49	28	159	3,031	20	82	1,329						
Thorne Bay	AK	112	54	340	7,937	61	182	3,250						
Togiak	AK	1												
Toksook Bay	AK	115	121	2,445	32,023	0	0	0						
Trapper Creek	AK	1												
Tununak	AK	81	82	2,504	27,951	0	0	0						
Unalakleet	AK	1												
Unalaska	AK	93	50	296	5,344	16	57	815						
Valdez	AK	30	15	125	2,993	4	10	285						
Ward Cove	AK	43	14	81	2,711	11	16	565						
Wasilla	AK	35	6	11	303	4	9	202						
Whale Pass	AK	5	0	0	0	2	12	338						
Willow	AK	1												
Wrangell	AK	495	277	2,142	40,672	126	329	6,744						
Yakutat	AK	101	55	438	8,642	18	134	1,501						
<b>Alaska Subtotal</b>		<b>9,651</b>	<b>4,502</b>	<b>40,664</b>	<b>759,949</b>	<b>2,218</b>	<b>8,395</b>	<b>148,871</b>						
<b>Non-Alaska Subtotal</b>		<b>68</b>	<b>4</b>	<b>34</b>	<b>520</b>	<b>11</b>	<b>148</b>	<b>1,845</b>						
<b>Total</b>		<b>9,719</b>	<b>4,506</b>	<b>40,698</b>	<b>760,469</b>	<b>2,228</b>	<b>8,543</b>	<b>150,717</b>						

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals include all tribes and communities. Includes potential fishers in Sand Point, King Cove, Toksook Bay, and Tununak who did not hold SHARCs in 2014. Blank cells indicate redacted data.

Table D-3.—Estimated subsistence harvests of halibut by gear type and place of residence, 2014.

City	State	Number of SHARCS Issued <sup>1</sup>	Estimated Harvest by Gear Type								
			Set Hook Gear			Hook and Line or Handline			All Gear		
			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	1	2	38	0	0	0	1	2	38
Akhiook	AK	20	0	0	0	21	75	2,195	21	75	2,195
Akutan	AK	5									
Alakanuk	AK	1									
Anchor Point	AK	12	9	159	2,212	3	27	495	9	186	2,707
Anchorage	AK	157	26	175	4,013	18	93	2,187	38	268	6,200
Angoon	AK	105	38	559	9,235	22	246	2,976	45	805	12,210
Aulke Bay	AK	4									
Barrow	AK	2									
Bethel	AK	9	0	0	0	6	13	400	6	13	400
Big Lake	AK	1									
Chefomak	AK	3									
Chenega Bay	AK	10	5	80	1,424	6	28	892	6	109	2,316
Chevak	AK	1									
Chignik	AK	3									
Chignik Lagoon	AK	7	0	0	0	3	25	238	3	25	238
Chignik Lake	AK	4									
Chiniak	AK	14	10	59	1,167	3	5	117	10	64	1,284
Chugiak	AK	4									
Clarks Point	AK	2									
Coffman Cove	AK	45	12	59	1,185	10	46	849	18	105	2,034
Cold Bay	AK	28	18	200	4,071	8	13	365	18	212	4,436
Cordova	AK	450	175	1,258	21,346	97	464	9,858	197	1,722	31,204
Craig	AK	393	171	1,164	29,240	73	383	5,930	200	1,547	35,170
Dillingham	AK	17	3	5	113	3	9	128	3	14	241
Douglas	AK	18	4	22	496	2	22	252	4	45	749
Dutch Harbor	AK	66	13	76	2,097	18	63	1,447	25	139	3,543
Eagle River	AK	10	5	36	404	2	22	137	5	58	540
Edna Bay	AK	25	16	68	2,619	0	0	0	16	68	2,619
Eek	AK	6	1	0	0	3	16	358	4	16	358
Egegik	AK	1									
Elfin Cove	AK	10	4	23	559	3	9	366	4	32	926
Fairbanks	AK	5									
False Pass	AK	1									
Fritz Creek	AK	1									
Girdwood	AK	1									
Glennallen	AK	1									
Gustavus	AK	60	26	214	4,547	18	96	2,847	33	310	7,394

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Table D-3.—Page 2 of 4

City	State	Number of SHARCs Issued <sup>a</sup>	Estimated Harvest by Gear Type								
			Set Hook Gear			Hook and Line or Handline			All Gear		
			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
Haines	AK	449	227	1,414	29,007	48	84	1,852	235	1,498	30,859
Hollis	AK	3									
Homer	AK	37	4	12	214	10	69	1,206	13	81	1,419
Hoonah	AK	188	62	861	16,332	44	314	5,037	92	1,175	21,369
Hydaburg	AK	78	32	295	10,682	13	21	894	37	317	11,577
Hyder	AK	27	18	81	1,893	8	5	75	18	86	1,968
Juneau	AK	325	68	443	9,601	34	259	4,007	88	702	13,608
Kake	AK	112	39	294	8,303	15	63	1,531	44	357	9,834
Karluk	AK	6	0	0	0	8	38	1,092	8	38	1,092
Kasaan	AK	11	3	19	684	2	2	54	3	21	738
Kasilof	AK	11	2	13	135	4	101	2,115	6	114	2,249
Kenai	AK	88	6	28	473	10	252	2,940	16	280	3,413
Ketchikan	AK	546	134	1,498	26,047	70	719	11,166	171	2,217	37,213
King Cove	AK	63	20	136	2,530	21	156	2,517	32	293	5,047
Kipnuk	AK	3									
Klawock	AK	192	74	768	22,663	33	277	3,917	90	1,045	26,580
Kodiak	AK	1,375	653	5,013	89,773	321	1,388	28,350	763	6,401	118,123
Kongiganak	AK	4									
Kwigillingok	AK	1									
Larsen Bay	AK	36	7	31	422	15	116	1,761	17	147	2,183
Manokotak	AK	3									
Mekoryuk	AK	18	3	161	5,241	9	98	1,498	13	258	6,739
Metlakatla	AK	163	36	134	3,372	18	30	831	46	165	4,203
Meyers Chuck	AK	9	7	28	819	0	0	0	7	28	819
Naknek	AK	6	2	3	53	2	1	23	2	4	75
Nanwalek	AK	75	12	423	12,508	13	99	1,793	19	522	14,301
Naukatki Bay	AK	24	15	62	2,023	7	23	957	15	85	2,980
Nelson Lagoon	AK	1									
Nikiski	AK	7	0	0	0	0	0	0	0	0	0
Nimilchik	AK	22	2	4	90	2	18	314	4	22	404
Nome	AK	16	5	37	598	0	0	0	5	37	598
North Pole	AK	2									
Old Harbor	AK	35	8	80	794	17	73	1,300	18	153	2,094
Ouzinkie	AK	24	18	95	1,968	9	31	383	22	127	2,351
Palmer	AK	8	0	0	0	2	6	238	2	6	238
Pelican	AK	37	27	78	2,522	12	25	961	30	104	3,483

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Table D-3.—Page 3 of 4

Estimated Harvest by Gear Type															
City	State	Number of SHARCs Issued <sup>a</sup>	Set Hook Gear				Hook and Line or Handline				All Gear				
			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				
Perryville	AK	5													
Petersburg	AK	863	289	1,795	34,161	189	881	14,214	375	2,677	48,375				
Point Baker	AK	14	8	59	1,186	3	4	86	8	63	1,271				
Port Alexander	AK	20	11	83	1,630	5	6	126	11	90	1,756				
Port Graham	AK	34	12	112	1,935	9	56	650	15	168	2,585				
Port Heiden	AK	1													
Port Lions	AK	39	16	70	1,513	13	58	1,413	24	128	2,926				
Port Protection	AK	1													
Quinhagak	AK	5													
Saint George Island	AK	2													
Saint Paul Island	AK	27	13	457	3,632	4	46	868	17	504	4,500				
Sand Point	AK	139	33	301	4,046	37	138	2,341	64	440	6,387				
Savoonga	AK	6	1	2	54	0	0	0	1	2	54				
Saxman	AK	3													
Seldovia	AK	140	52	573	8,978	45	527	6,675	75	1,100	15,653				
Seward	AK	10	0	0	0	1	22	405	1	22	405				
Sitka	AK	1,530	600	3,732	81,452	182	541	9,657	644	4,273	91,109				
Skagway	AK	68	28	63	1,445	16	27	326	30	90	1,771				
Soldotna	AK	43	2	37	556	8	119	1,363	10	156	1,920				
Sterling	AK	5													
Tatitlek	AK	19	9	46	1,626	4	9	374	10	55	2,000				
Teller	AK	1													
Tenakee Springs	AK	49	25	123	2,478	9	36	553	28	159	3,031				
Thorne Bay	AK	112	47	272	6,660	20	68	1,277	54	340	7,937				
Togiak	AK	1													
Toksook Bay	AK	115	0	0	0	121	2,445	32,023	121	2,445	32,023				
Trapper Creek	AK	1													
Tununak	AK	81	7	527	3,710	80	1,977	24,241	82	2,504	27,951				
Unalakleet	AK	1													
Unalaska	AK	93	44	230	4,181	30	66	1,163	50	296	5,344				
Valdez	AK	30	15	112	2,748	4	13	245	15	125	2,993				
Ward Cove	AK	43	8	62	2,158	6	19	553	14	81	2,711				
Wasilla	AK	35	4	2	101	4	9	202	6	11	303				
Whale Pass	AK	5													
Willow	AK	1													

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Table D-3.—Page 4 of 4

City	State	Number of SHARCs Issued <sup>a</sup>	Estimated Harvest by Gear Type								
			Set Hook Gear			Hook and Line or Handline			All Gear		
			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
Wrangell	AK	495	233	1,536	29,927	123	606	10,744	277	2,142	40,672
Yakutat	AK	101	47	372	7,332	14	66	1,310	55	438	8,642
<b>Alaska Subtotal</b>		<b>9,651</b>	<b>3,548</b>	<b>26,859</b>	<b>537,945</b>	<b>2,010</b>	<b>13,806</b>	<b>222,005</b>	<b>4,502</b>	<b>40,664</b>	<b>759,949</b>
<b>Non-Alaska Subtotal</b>		<b>68</b>	<b>2</b>	<b>4</b>	<b>70</b>	<b>2</b>	<b>30</b>	<b>450</b>	<b>4</b>	<b>34</b>	<b>520</b>
<b>Total</b>		<b>9,719</b>	<b>3,550</b>	<b>26,863</b>	<b>538,015</b>	<b>2,012</b>	<b>13,836</b>	<b>222,455</b>	<b>4,506</b>	<b>40,698</b>	<b>760,469</b>

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals include all tribes and communities. Includes potential fishers in Sand Point, King Cove, Toksook Bay, and Tununak who did not hold SHARCs in 2014. Blank cells indicate redacted data.

Table D-4.—Estimated number of respondents that subsistence or sport fished, by place of residence, 2014.

City	State	Number of SHARCs Issued <sup>a</sup>	Estimated Number Subsistence or Sport Fished
Adak	AK	6	1
Akhiok	AK	20	21
Akutan	AK	5	
Alakanuk	AK	1	
Anchor Point	AK	12	11
Anchorage	AK	157	50
Angoon	AK	105	47
Auke Bay	AK	4	
Barrow	AK	2	
Bethel	AK	9	6
Big Lake	AK	1	
Chefornak	AK	3	
Chenega Bay	AK	10	8
Chevak	AK	1	
Chignik	AK	3	
Chignik Lagoon	AK	7	3
Chignik Lake	AK	4	
Chiniak	AK	14	10
Chugiak	AK	4	
Clarks Point	AK	2	
Coffman Cove	AK	45	30
Cold Bay	AK	28	20
Cordova	AK	450	242
Craig	AK	393	263
Dillingham	AK	17	5
Douglas	AK	18	9
Dutch Harbor	AK	66	33
Eagle River	AK	10	5
Edna Bay	AK	25	17
Eek	AK	6	4
Egegik	AK	1	
Elfin Cove	AK	10	4
Fairbanks	AK	5	
False Pass	AK	1	
Fritz Creek	AK	1	
Girdwood	AK	1	
Glennallen	AK	1	
Gustavus	AK	60	40
Haines	AK	449	261
Hollis	AK	3	
Homer	AK	37	15
Hoonah	AK	188	109
Hydaburg	AK	78	37
Hyder	AK	27	19

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City	State	Number of SHARCs Issued <sup>a</sup>	Estimated Number Subsistence or Sport Fished
Juneau	AK	325	143
Kake	AK	112	52
Karluk	AK	6	8
Kasaan	AK	11	5
Kasilof	AK	11	6
Kenai	AK	88	21
Ketchikan	AK	546	263
King Cove	AK	63	35
Kipnuk	AK	3	
Klawock	AK	192	111
Kodiak	AK	1,375	943
Kongiganak	AK	4	
Kwigillingok	AK	1	
Larsen Bay	AK	36	23
Manokotak	AK	3	
Mekoryuk	AK	18	13
Metlakatla	AK	163	55
Meyers Chuck	AK	9	7
Naknek	AK	6	2
Nanwalek	AK	75	46
Naukati Bay	AK	24	17
Nelson Lagoon	AK	1	
Nikiski	AK	7	0
Ninilchik	AK	22	12
Nome	AK	16	5
North Pole	AK	2	
Old Harbor	AK	35	18
Ouzinkie	AK	24	24
Palmer	AK	8	3
Pelican	AK	37	33
Perryville	AK	5	
Petersburg	AK	863	495
Point Baker	AK	14	10
Port Alexander	AK	20	14
Port Graham	AK	34	17
Port Heiden	AK	1	
Port Lions	AK	39	35
Port Protection	AK	1	
Quinhagak	AK	5	
Saint George Island	AK	2	
Saint Paul Island	AK	27	17
Sand Point	AK	139	64
Savoonga	AK	6	1

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City	State	Number of SHARCs Issued <sup>a</sup>	Estimated Number Subsistence or Sport Fished
Saxman	AK	3	
Seldovia	AK	140	90
Seward	AK	10	1
Sitka	AK	1,530	769
Skagway	AK	68	39
Soldotna	AK	43	17
Sterling	AK	5	
Tatitlek	AK	19	10
Teller	AK	1	
Tenakee Springs	AK	49	39
Thorne Bay	AK	112	82
Togiak	AK	1	
Toksook Bay	AK	115	121
Trapper Creek	AK	1	
Tununak	AK	81	82
Unalakleet	AK	1	
Unalaska	AK	93	59
Valdez	AK	30	15
Ward Cove	AK	43	25
Wasilla	AK	35	6
Whale Pass	AK	5	
Willow	AK	1	
Wrangell	AK	495	327
Yakutat	AK	101	64
<b>Alaska subtotal</b>		<b>9,651</b>	<b>5,556</b>
<b>Non-Alaska subtotal</b>		<b>68</b>	<b>14</b>
<b>Total</b>		<b>9,719</b>	<b>5,570</b>

a. To protect confidentiality, data for tribes and communities with 5 or fewer SHARCs issued are not reported in this table. Subtotals include all tribes and communities. Includes potential fishers in Sand Point, King Cove, Toksook Bay, and Tununak who did not hold SHARCs in 2014. Blank cells indicate redacted data.

Table D-5.—Estimated subsistence harvests of halibut by gear type, SHARC type, and regulatory area, 2014.

Tribal Name <sup>b</sup>	Regulatory Area	Return Rate		Subsistence Fished Halibut			Subsistence Halibut Harvest			Sport Fished Halibut			Sport Halibut Harvest		
		SHARCs <sup>a</sup> Issued	Surveys Returned	Percent of SHARCs <sup>a</sup>	Estimated Number Respondents	Percent of SHARCs <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>	Estimated Number Respondents	Percent of SHARCs <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>	
Angoon Community Association	2C	77	28	36.4%	28	35.7%	459	7,561	6	7.1%	8	186			
Central Council Tlingit and Haida Indian Tribes	2C	460	205	44.6%	139	30.2%	1,178	21,521	101	22.0%	608	11,909			
Chilkat Indian Village	2C	11	8	72.7%	1	12.5%	1	67	1	12.5%	8	186			
Chilkoot Indian Association	2C	44	26	59.1%	14	30.8%	95	3,833	3	7.7%	2	51			
Craig Community Association	2C	43	23	53.5%	26	60.9%	194	8,189	7	17.4%	15	379			
Douglas Indian Association	2C	7	3	42.9%	0	0.0%	0	0	0	0.0%	0	0			
Hoonah Indian Association	2C	114	55	48.2%	50	43.6%	781	14,976	21	18.2%	79	1,379			
Hydaburg Cooperative Association	2C	74	45	60.8%	30	40.0%	252	9,150	2	2.2%	3	74			
Ketchikan Indian Corporation	2C	480	204	42.5%	136	28.4%	1,725	29,249	136	28.4%	478	7,860			
Klawock Cooperative Association	2C	66	30	45.5%	22	33.3%	277	10,172	2	3.3%	0	0			
Metlakatla Indian Community, Annette Island Reserve	2C	148	73	49.3%	39	26.0%	166	4,191	16	11.0%	45	1,361			
Organized Village of Kake	2C	83	53	63.9%	30	35.8%	272	6,912	5	5.7%	2	141			
Organized Village of Kasaaan	2C	6	3	50.0%	2	33.3%	8	180	2	33.3%	0	0			
Organized Village of Saxman	2C	25	8	32.0%	6	25.0%	16	164	3	12.5%	56	1,172			
Petersburg Indian Association	2C	61	43	70.5%	24	39.5%	279	3,474	13	20.9%	58	1,000			
Sitka Tribe of Alaska	2C	251	141	56.2%	77	30.5%	844	15,095	27	10.6%	59	1,275			
Skagway Village Association	2C	79	52	65.8%	33	42.3%	225	4,923	14	17.3%	11	219			
<b>Subtotal, Area 2C</b>		<b>2,031</b>	<b>1,002</b>	<b>49.3%</b>	<b>657</b>	<b>32.4%</b>	<b>6,785</b>	<b>139,747</b>	<b>359</b>	<b>17.7%</b>	<b>1,431</b>	<b>27,190</b>			
Kenaitze Indian Tribe	3A	115	62	53.9%	15	12.9%	176	2,393	7	6.5%	11	104			
Lesnoi Village (Woody)	3A	34	19	55.9%	11	31.6%	84	1,819	2	5.3%	2	31			

Tribal Name <sup>b</sup>	Regulatory Area	Return Rate			Subsistence Fished Halibut		Subsistence Halibut Harvest		Sport Fished Halibut		Sport Halibut Harvest	
		SHARCS <sup>a</sup> Issued	Surveys Returned	Percent of SHARCS <sup>a</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>
Native Village of Afognak	3A	16	11	68.8%	9	54.5%	55	998	3	18.2%	6	125
Native Village of Akhiok	3A	21	10	47.6%	19	90.0%	71	2,079	0	0.0%	0	0
Native Village of Chenega	3A	19	12	63.2%	10	50.0%	76	2,316	2	8.3%	0	0
Native Village of Eyak	3A	58	30	51.7%	23	40.0%	261	4,177	10	16.7%	33	696
Native Village of Karluk	3A	8	4	50.0%	8	100.0%	38	1,092	6	75.0%	16	632
Native Village of Larsen Bay	3A	38	15	39.5%	15	40.0%	160	2,575	8	20.0%	38	466
Native Village of Nanwalek	3A	73	27	37.0%	16	21.9%	311	6,456	1	1.4%	1	8
Native Village of Ouzinkie	3A	26	10	38.5%	18	70.0%	177	3,793	5	20.0%	10	78
Native Village of Port Graham	3A	36	22	61.1%	15	40.9%	157	2,418	7	18.2%	13	191
Native Village of Port Lions	3A	32	24	75.0%	25	79.2%	125	3,018	12	37.5%	25	566
Native Village of Tatitlek	3A	22	13	59.1%	8	38.5%	44	1,326	0	0.0%	0	0
Nimlichik Village	3A	56	28	50.0%	12	21.4%	222	2,679	12	21.4%	70	968
Seldovia Village Tribe	3A	57	34	59.6%	25	44.1%	349	4,984	18	32.4%	45	704
Sun'Aq Tribe of Kodiak (Formerly Shoonaq')	3A	102	55	53.9%	59	58.2%	422	7,622	22	21.8%	76	1,444
Village of Kanatak	3A	17	0	0.0%	0	0.0%	0	0	0	0.0%	0	0
Village of Old Harbor	3A	35	21	60.0%	17	47.6%	82	1,488	7	19.0%	20	350
Village of Salamatoff	3A	24	18	75.0%	12	50.0%	289	3,505	0	0.0%	0	0
Yakutat Tlingit Tribe	3A	42	24	57.1%	28	66.7%	282	6,177	2	4.2%	2	79
<b>Subtotal, Area 3A</b>		<b>831</b>	<b>439</b>	<b>52.8%</b>	<b>345</b>	<b>41.5%</b>	<b>3,381</b>	<b>60,913</b>	<b>123</b>	<b>14.8%</b>	<b>368</b>	<b>6,441</b>
Agdaagux Tribe of King Cove	3B	43	39	90.7%	22	51.3%	170	2,678	7	15.4%	32	538
Chignik Lake Village	3B	13	3	23.1%	9	66.7%	0	0	4	33.3%	0	0
Ivanoff Bay Village	3B	5	3	60.0%	3	66.7%	20	363	0	0.0%	0	0
Native Village of Belkofski	3B	6	3	50.0%	2	33.3%	0	0	0	0.0%	0	0
Native Village of Chignik	3B	2										
Native Village of Chignik Lagoon	3B	13	9	69.2%	7	55.6%	43	585	3	22.2%	12	206

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Tribal Name <sup>b</sup>	Regulatory Area	Return Rate			Subsistence Fished Halibut			Subsistence Halibut Harvest			Sport Fished Halibut		Sport Halibut Harvest	
		SHARCS <sup>a</sup> Issued	Surveys Returned	Percent of SHARCS <sup>a</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>		
Native Village of False Pass	3B	2												
Native Village of Nelson Lagoon	3B	2												
Native Village of Perryville	3B	7	5	71.4%	6	80.0%	34	803	0	0.0%	0	0	0	
Native Village of Unga	3B	7	7	100.0%	4	57.1%	40	611	0	0.0%	0	0	0	
Pauloff Harbor Village	3B	70	50	71.4%	24	34.0%	62	1,281	1	2.0%	0	0	0	
Qagan Toyagungin Tribe of Sand Point Village	3B	77	68	88.3%	33	42.6%	217	2,687	1	1.5%	0	0	0	
<b>Subtotal, Area 3B</b>		<b>247</b>	<b>192</b>	<b>77.7%</b>	<b>111</b>	<b>44.7%</b>	<b>587</b>	<b>9,041</b>	<b>16</b>	<b>6.6%</b>	<b>44</b>	<b>743</b>	<b>47</b>	
Native Village of Akutan	4A	9	5	55.6%	0	0.0%	0	0	2	20.0%	2	47	0	
Qawalingin Tribe of Unalaska	4A	23	9	39.1%	8	33.3%	10	134	3	11.1%	0	0	0	
<b>Subtotal, Area 4A</b>		<b>32</b>	<b>14</b>	<b>43.8%</b>	<b>8</b>	<b>24.0%</b>	<b>10</b>	<b>134</b>	<b>4</b>	<b>13.6%</b>	<b>2</b>	<b>47</b>	<b>0</b>	
Native Village of Atka	4B	5												
<b>Subtotal, Area 4B</b>		<b>5</b>												
Pribilof Islands Aleut Community of St George	4C	4												
Pribilof Islands Aleut Community of St Paul	4C	27	7	25.9%	15	57.1%	494	4,325	0	0.0%	0	0	0	
<b>Subtotal, Area 4C</b>		<b>31</b>	<b>8</b>	<b>25.8%</b>	<b>15</b>	<b>49.8%</b>	<b>494</b>	<b>4,325</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0</b>	<b>0</b>	
Native Village of Diomedede (Inalik)	4D	1												
Native Village of Savoonga	4D	6	5	83.3%	2	40.0%	24	459	1	20.0%	6	108	0	
<b>Subtotal, Area 4D</b>		<b>7</b>	<b>6</b>	<b>85.7%</b>	<b>3</b>	<b>48.6%</b>	<b>32</b>	<b>579</b>	<b>1</b>	<b>17.1%</b>	<b>6</b>	<b>108</b>	<b>0</b>	
Chevak Native Village (Kashunamiut)	4E	1												
Chinik Eskimo Community	4E	1												
Egegik Village	4E	4												
King Island Native Community	4E	2												
King Salmon Tribal Council	4E	1												
Manokotak Village	4E	1												
Naknek Native Village	4E	4												

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Tribal Name <sup>b</sup>	Regulatory Area	Return Rate			Subsistence Fished Halibut		Subsistence Halibut Harvest		Sport Fished Halibut		Sport Halibut Harvest	
		SHARCS <sup>a</sup> Issued	Surveys Returned	Percent of SHARCS <sup>a</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>
Native Village of Aleknagik	4E	3										
Native Village of Council	4E	4										
Native Village of Dillingham (Curyung)	4E	7	4	57.1%	2	25.0%	12	239	4	50.0%	7	161
Native Village of Eek	4E	8	6	75.0%	5	66.7%	29	758	0	0.0%	0	0
Native Village of Hooper Bay	4E	1										
Native Village of Kakanak	4E	1										
Native Village Of Kipnuk	4E	4										
Native Village of Kongiganak	4E	5										
Native Village of Koyuk	4E	1										
Native Village of Kwigillingok	4E	1										
Native Village of Kwinhagak	4E	5										
Native Village of Mekoryuk	4E	4										
Native Village of Nightmute	4E	1										
Native Village of Scammon Bay	4E	2										
Native Village of Shaktoolik	4E	1										
Native Village of Toksook Bay	4E	114	85	74.6%	113	98.8%	2,303	30,480	0	0.0%	0	0
Native Village of Tununak	4E	70	53	75.7%	70	100.0%	2,142	24,068	0	0.0%	0	0
Native Village of Unalakleet	4E	1										
Newtok Village	4E	1										
Nome Eskimo Community	4E	8	2	25.0%	4	50.0%	20	540	0	0.0%	0	0
Orutsararmiut Native Village	4E	8	7	87.5%	5	57.1%	0	0	1	14.3%	7	69

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Tribal Name <sup>b</sup>	Regulatory Area	Return Rate		Subsistence Fished Halibut		Subsistence Halibut Harvest		Sport Fished Halibut		Sport Halibut Harvest	
		SHARCS <sup>a</sup> Issued	Surveys Returned	Percent of SHARCS <sup>a</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish
Platinum Traditional Village	4E	1									
South Naknek Village	4E	1									
Traditional Village of Togiak	4E	1									
Village of Atakamuk	4E	1	2	33.3%	6	100.0%	144	1,955	0	0.0%	0
Village of Cheformak	4E	6									
Village of Clark's Point	4E	2									
<b>Subtotal, Area 4E</b>		<b>276</b>	<b>183</b>	<b>66.3%</b>	<b>217</b>	<b>78.5%</b>	<b>4,791</b>	<b>59,862</b>	<b>9</b>	<b>3.3%</b>	<b>938</b>
<b>Tribal Subtotal</b>		<b>3,460</b>	<b>1,844</b>	<b>53.3%</b>	<b>1,356</b>	<b>39.2%</b>	<b>16,080</b>	<b>274,602</b>	<b>513</b>	<b>14.8%</b>	<b>35,467</b>

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Rural Community <sup>b</sup>	Return Rate				Subsistence Fished Halibut		Subsistence Halibut Harvest		Sport Fished Halibut		Sport Halibut Harvest	
	Regulatory Area	SHARCS <sup>a</sup> Issued	Surveys Returned	Percent of SHARCS <sup>a</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>
Angoon	2C	17	8	47.1%	11	62.5%	281	3,052	6	37.5%	74	717
Coffman Cove	2C	46	38	82.6%	19	42.1%	115	2,305	24	52.6%	107	2,297
Craig	2C	282	224	79.4%	136	48.2%	1,098	22,739	89	31.7%	447	7,071
Edna Bay	2C	30	25	83.3%	17	56.0%	83	2,943	4	12.0%	7	279
Elfin Cove	2C	9	7	77.8%	4	42.9%	32	926	0	0.0%	0	0
Gustavus	2C	62	53	85.5%	34	54.7%	322	7,614	16	26.4%	75	1,531
Haines	2C	400	322	80.5%	225	56.2%	1,420	28,064	65	16.1%	111	2,559
Hollis	2C	30	21	70.0%	16	52.4%	137	2,531	3	9.5%	13	102
Hoonah	2C	82	67	81.7%	45	55.2%	398	6,533	26	31.3%	140	2,175
Hydaburg	2C	8	6	75.0%	8	100.0%	92	3,000	4	50.0%	12	240
Hyder	2C	27	23	85.2%	18	65.2%	86	1,968	9	34.8%	8	149
Juneau	2C	11	6	54.5%	6	50.0%	83	1,650	4	33.3%	11	330
Kake	2C	41	31	75.6%	19	45.2%	183	4,345	16	38.7%	132	1,989
Kasaan	2C	8	5	62.5%	5	60.0%	22	798	2	20.0%	2	24
Ketchikan	2C	28	14	50.0%	14	50.0%	88	1,710	14	50.0%	172	2,619
Klawock	2C	128	88	68.8%	58	45.5%	627	11,326	54	42.0%	284	4,642
Klukwan	2C	1										
Metlakatla	2C	20	11	55.0%	9	45.5%	33	895	7	36.4%	11	191
Meyers Chuck	2C	9	8	88.9%	7	75.0%	28	819	0	0.0%	0	0
Naikati Bay	2C	44	27	61.4%	31	70.4%	205	7,526	10	22.2%	41	739
Pelican	2C	32	23	71.9%	18	56.5%	60	1,649	11	34.8%	122	2,583
Petersburg	2C	781	604	77.3%	341	43.7%	2,302	43,026	224	28.6%	882	14,635
Point Baker	2C	11	8	72.7%	6	50.0%	32	673	1	12.5%	3	41
Port Alexander	2C	19	18	94.7%	12	61.1%	83	1,504	5	27.8%	13	352
Port Protection	2C	10	7	70.0%	10	100.0%	60	1,230	4	42.9%	7	121
Saxman	2C	3										
Sitka	2C	1,285	890	69.3%	573	44.6%	3,454	78,286	237	18.4%	666	12,167
Skagway	2C	64	55	85.9%	29	45.5%	80	1,986	22	34.5%	67	1,231
Tenakee Springs	2C	48	41	85.4%	29	61.0%	160	3,040	20	41.5%	82	1,329
Thorne Bay	2C	119	94	79.0%	57	47.9%	342	8,087	62	52.1%	181	3,210
Ward Cove	2C	4										
Whale Pass	2C	12	8	66.7%	6	50.0%	66	872	9	75.0%	45	855
Wrangell	2C	404	300	74.3%	242	60.0%	1,919	36,212	110	27.3%	322	6,596
<b>Subtotal, Area 2C</b>		<b>4,075</b>	<b>3,037</b>	<b>74.5%</b>	<b>2,006</b>	<b>49.2%</b>	<b>13,954</b>	<b>288,421</b>	<b>1,060</b>	<b>26.0%</b>	<b>4,095</b>	<b>71,395</b>
Akhiok	3A	31	19	61.3%	10	31.6%	103	1,806	10	31.6%	29	330
Anchorage	3A	1										
Chenequa Bay	3A	7	6	85.7%	5	66.7%	86	1,782	1	16.7%	12	109
Chiniak	3A	9	8	88.9%	7	75.0%	56	991	2	25.0%	6	135
Cordova	3A	397	293	73.8%	176	44.4%	1,438	26,506	87	21.8%	214	4,153

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Rural Community <sup>b</sup>	Return Rate				Subsistence Fished Halibut		Subsistence Halibut Harvest		Sport Fished Halibut		Sport Halibut Harvest	
	Regulatory Area	SHARCS <sup>a</sup> Issued	Surveys Returned	Percent of SHARCS <sup>a</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>
Homer	3A	3			691	55.2%	5,841	107,678	436	34.9%	1,686	30,933
Kodiak	3A	1,251	786	62.8%								
Larsen Bay	3A	4										
Nanwalek	3A	3										
Old Harbor	3A	5										
Ouzinkie	3A	7	5	71.4%	7	100.0%	34	777	1	20.0%	6	74
Port Graham	3A	6	6	100.0%	2	33.3%	40	780	0	0.0%	0	0
Port Lions	3A	16	8	50.0%	4	25.0%	24	338	10	62.5%	28	360
Seldovia	3A	120	87	72.5%	68	56.3%	1,001	14,393	37	31.0%	221	3,000
Tatitlek	3A	10	5	50.0%	8	80.0%	50	1,469	6	60.0%	10	285
Valdez	3A	1										
Yakutat	3A	58	42	72.4%	26	45.2%	197	3,919	17	28.6%	133	1,422
<b>Subtotal, Area 3A</b>		<b>1,929</b>	<b>1,278</b>	<b>66.3%</b>	<b>1,016</b>	<b>52.7%</b>	<b>9,216</b>	<b>170,435</b>	<b>612</b>	<b>31.7%</b>	<b>2,371</b>	<b>41,219</b>
Cold Bay	3B	23	18	78.3%	15	66.7%	179	3,594	5	22.2%	15	241
False Pass	3B	3	2	66.7%	3	100.0%	26	849	0	0.0%	0	0
King Cove	3B	19	19	100.0%	11	57.9%	145	2,678	3	15.8%	8	154
Sand Point	3B	6	6	100.0%	3	50.0%	145	2,175	0	0.0%	0	0
<b>Subtotal, Area 3B</b>		<b>51</b>	<b>45</b>	<b>88.2%</b>	<b>32</b>	<b>63.4%</b>	<b>494</b>	<b>9,296</b>	<b>8</b>	<b>15.9%</b>	<b>23</b>	<b>394</b>
Akutun	4A	1										
Dutch Harbor	4A	28	11	39.3%	10	36.4%	59	1,594	8	27.3%	20	439
Unalaska	4A	105	72	68.6%	51	48.6%	290	5,468	23	22.2%	109	1,652
<b>Subtotal, Area 4A</b>		<b>134</b>	<b>84</b>	<b>62.7%</b>	<b>61</b>	<b>45.7%</b>	<b>349</b>	<b>7,062</b>	<b>31</b>	<b>23.1%</b>	<b>130</b>	<b>2,091</b>
Adak	4B	2										
<b>Subtotal, Area 4B</b>		<b>2</b>										
St Paul Island	4C	2										
<b>Subtotal, Area 4C</b>		<b>2</b>										
Savoonga	4D	1										
<b>Subtotal, Area 4D</b>		<b>1</b>										
Alakanuk	4E	1										
Bethel	4E	1										
Chevak	4E	1										
Dillingham	4E	13	8	61.5%	2	12.5%	2	2	0	0.0%	0	0
Egegik	4E	1										
King Salmon	4E	2										
Koyuk	4E	1										
Manokotak	4E	1										
Mekoryuk	4E	15	8	53.3%	11	75.0%	238	6,539	0	0.0%	0	0
Naknek	4E	3										
Nome	4E	13	10	76.9%	4	30.0%	29	478	0	0.0%	0	0

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Rural Community <sup>b</sup>	Return Rate			Subsistence Fished Halibut		Subsistence Halibut Harvest		Sport Fished Halibut		Sport Halibut Harvest		
	Regulatory Area	SHARCS <sup>a</sup> Issued	Surveys Returned	Percent of SHARCS <sup>a</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>	Estimated Number Respondents	Percent of SHARCS <sup>a</sup>	Estimated Number Fish	Estimated Number Pounds <sup>c</sup>
Pilot Point	4E	1										
Port Heiden	4E	1										
Tununak	4E	10	8	80.0%	9	87.5%	256	2,308	0	0.0%	0	0
Unalakleet	4E	1										
<b>Subtotal, Area 4E</b>		<b>65</b>	<b>43</b>	<b>66.2%</b>	<b>31</b>	<b>47.0%</b>	<b>587</b>	<b>10,266</b>	<b>2</b>	<b>3.1%</b>	<b>13</b>	<b>74</b>
<b>Rural community subtotal</b>	<b>All</b>	<b>6,259</b>	<b>4,489</b>	<b>71.7%</b>	<b>3,147</b>	<b>50.3%</b>	<b>24,602</b>	<b>485,517</b>	<b>1,714</b>	<b>27.4%</b>	<b>6,637</b>	<b>115,224</b>
<b>Tribal subtotal</b>	<b>All</b>	<b>3,460</b>	<b>1,847</b>	<b>53.4%</b>	<b>1,359</b>	<b>39.3%</b>	<b>16,096</b>	<b>274,952</b>	<b>514</b>	<b>14.9%</b>	<b>1,906</b>	<b>35,492</b>
<b>Rural community subtotal</b>	<b>All</b>	<b>6,259</b>	<b>4,489</b>	<b>71.7%</b>	<b>3,147</b>	<b>50.3%</b>	<b>24,602</b>	<b>485,517</b>	<b>1,714</b>	<b>27.4%</b>	<b>6,637</b>	<b>115,224</b>
<b>Total</b>	<b>All</b>	<b>9,719</b>	<b>6,336</b>	<b>65.2%</b>	<b>4,506</b>	<b>46.4%</b>	<b>40,698</b>	<b>760,469</b>	<b>2,228</b>	<b>22.9%</b>	<b>8,543</b>	<b>150,717</b>

Source ADF&G Division of Subsistence SHARC<sup>a</sup> surveys, 2014.

Note To protect confidentiality, data for tribes and communities with 5 or fewer SHARCS<sup>a</sup> issued are not reported in this table. Subtotals include all tribes and communities.

Total includes potential fishers without SHARCS in Sand Point, King Cove, Toksook Bay, and Tununak.

a. Subsistence Halibut Registration Certificate (SHARC).

b. "Tribal" = individuals who obtained SHARCS as members of an eligible tribe, sorted by location of tribal headquarters. "Rural" = individuals who obtained SHARCS as residents of an eligible rural community. "All" = sum of tribal and rural SHARC holders for a regulatory area based on location of tribal headquarters or rural community.

Because some SHARC holders may fish in regulatory areas other than the location of the area of their tribal headquarters or rural residence, area totals in this table differ slightly from those in tables 5, 6, and 8.

c. Pounds net (dressed) weight = 75% of round (whole) weight.

## Appendix E.–Project findings summary.



# SUBSISTENCE HARVESTS OF PACIFIC HALIBUT IN ALASKA, 2014

Division of Subsistence, Alaska Department of Fish and Game  
333 Raspberry Road, Anchorage, AK 99518  
January 2016

Through a grant from the National Marine Fisheries Service (NMFS), the Alaska Department of Fish and Game (ADF&G) Division of Subsistence conducted a study to estimate the subsistence harvests of Pacific halibut in Alaska in 2014. The full results of the study appear in the Division's Technical Paper No. 414, "Subsistence Harvests of Pacific Halibut in Alaska, 2014" (January 2016). Key points in the report include the following:

- In May 2003, the NMFS published final federal regulations for a subsistence halibut fishery in Alaska. Residents of 118 rural communities and designated rural areas, and members of 123 tribes are eligible to participate. Fishers must obtain a subsistence halibut registration certificate (SHARC) from NMFS before fishing ([www.fakr.noaa.gov/ram/subsistence/halibut.htm](http://www.fakr.noaa.gov/ram/subsistence/halibut.htm); 800-304-4846).
- 2014 was the 12th year in which subsistence halibut fishing took place under these regulations, with harvest estimates available for every year but 2013. Information about subsistence halibut harvests in 2003–2012 is reported in Division of Subsistence Technical Papers 288, 304, 320, 333, 342, 348, 357, 367, 378, and 388, respectively.
- To estimate the 2014 harvests, a one-page survey form was mailed to SHARC holders in early 2015 or administered in person in 6 communities. After three mailings and community visits, 6,336 of 9,719 potential subsistence halibut fishers (65%) responded. Participation in the survey was voluntary.
- An estimated 4,506 individuals subsistence fished for halibut in 2014 (Figure 8).
- The estimated subsistence harvest was 40,698 halibut for 760,469 pounds net weight.
- Of this total, 71% was harvested with setline (stationary) gear (longline or skate) and 29% was harvested with hand-operated gear (handline or rod and reel).
- The largest subsistence harvests occurred in Southeast Alaska (Halibut Regulatory Area 2C), at 56% of the total, followed by Southcentral Alaska (Area 3A) at 32% and East Bering Sea Coast (Area 4E) at 9%. Table 5 and Figure 16 from the final report give more details on harvests by gear type and area.
- Based on place of residence of SHARC holders, communities with the largest subsistence halibut harvests in 2014 were Kodiak and Sitka (the largest eligible communities) (Figure 21).
- Based on preliminary data from the International Pacific Halibut Commission and this study, the estimated halibut removal in Alaska in 2014 was 33,804 million pounds, net weight. Subsistence harvests accounted for 2.3% of this total (Figure 27).
- The report concludes that the project was a success, with good response rates and a reliable estimate of subsistence halibut harvests. However, analysis suggests that active fishers in some communities have not renewed their SHARCs. Additional outreach among eligible tribes and in rural areas is necessary to maximize enrollment of fishers in the SHARC program and involvement in the post-season harvest survey.
- Due to budget constraints, a survey to estimate subsistence halibut harvests in Alaska in 2015 will not take place. The report recommends that monitoring of the Alaska subsistence halibut harvest resume in the future to evaluate trends in the fishery.

**For a copy of the full report, go to <http://www.adfg.alaska.gov/sf/publications/>, or call the Division of Subsistence of ADF&G at 907-267-2353 (Anchorage) or 907-465-4147 (Juneau).**

Table 5.—Estimated harvests of halibut in numbers of fish and pounds net (dressed, head-off) weight by regulatory area and subarea, 2014.

Subsistence area	Estimated subsistence harvest by gear type <sup>a</sup>											
	Set hook gear				Hook & line or handline				All gear			
	Estimated number respondents fish <sup>b</sup>	Estimated number halibut harvested	Estimated pounds halibut harvested <sup>b</sup>	Estimated number respondents fish <sup>c</sup>	Estimated number halibut harvested	Estimated pounds halibut harvested <sup>b</sup>	Estimated number respondents fish <sup>c</sup>	Estimated number halibut harvested	Estimated pounds halibut harvested <sup>b</sup>	Estimated number respondents fish <sup>c</sup>	Estimated number halibut harvested	Estimated pounds halibut harvested <sup>b</sup>
Southern Southeast Alaska												
2C	1,211	8,472	185,744	627	3,177	54,233	1,480	11,649	239,976	887	3,435	59,026
Sitka LAMP Area	572	3,286	72,906	181	513	8,288	604	3,799	81,193	271	665	12,837
Northern Southeast Alaska	571	4,055	82,037	231	1,142	19,765	664	5,197	101,802	308	1,354	25,127
Subtotal, Area 2C	<b>2,283</b>	<b>15,812</b>	<b>340,686</b>	<b>1,007</b>	<b>4,832</b>	<b>82,285</b>	<b>2,670</b>	<b>20,645</b>	<b>422,971</b>	<b>1,424</b>	<b>5,454</b>	<b>96,990</b>
Yakutat Area	67	490	10,101	23	107	1,982	78	597	12,082	36	223	2,691
3A	241	1,646	31,648	127	525	12,156	273	2,171	43,805	134	301	5,823
3A	121	1,480	28,985	128	1,501	21,380	201	2,981	50,365	110	481	7,145
Cook Inlet	462	3,096	54,296	226	836	17,243	538	3,952	71,538	376	1,326	23,855
Kodiak Island Road System	423	2,458	44,928	279	922	18,651	544	3,379	63,578	244	553	10,876
3A	<b>1,168</b>	<b>9,170</b>	<b>169,957</b>	<b>687</b>	<b>3,891</b>	<b>71,411</b>	<b>1,460</b>	<b>13,061</b>	<b>241,369</b>	<b>781</b>	<b>2,884</b>	<b>50,388</b>
Subtotal, Area 3A												
Chignik Area	19	48	1,126	20	38	451	26	86	1,577	8	8	119
3B	51	345	6,735	58	297	5,066	87	642	11,801	16	50	791
Lower Alaska Peninsula	70	294	7,861	79	335	5,517	113	728	13,378	24	58	911
Subtotal, Area 3B												
Eastern Aleutians - East	56	284	5,840	42	1,807	7,647	67	367	7,647	34	127	2,204
4A	4	0	0	5	3	80	7	3	80	6	15	142
Eastern Aleutians - West	57	284	5,840	44	87	1,887	70	371	7,727	39	141	2,346
Subtotal, Area 4A												
Western Aleutians - East	2	6	160	4	6	94	5	13	254	1	5	53
4B	2	6	160	4	6	94	5	13	254	1	5	53
Subtotal, Area 4B												
St. Paul Island	12	446	3,389	0	0	0	12	446	3,389	0	0	0
4C	12	446	3,389	0	0	0	12	446	3,389	0	0	0
Subtotal, Area 4C												
St. Lawrence Island	1	2	54	0	0	0	1	2	54	0	0	0
4D	1	2	54	0	0	0	1	2	54	0	0	0
Subtotal, Area 4D												
Bristol Bay	8	16	299	11	135	861	131	151	1,160	4	1	29
4E	20	708	9,366	228	4,549	60,398	241	5,238	69,765	4	0	0
Yukon Delta	4	24	403	0	0	0	4	24	403	0	0	0
Norton Sound	31	748	10,068	238	4,685	61,259	257	5,432	71,327	4	1	29
Subtotal, Area 4E												
<b>Grand total</b>	<b>3,550</b>	<b>26,863</b>	<b>538,015</b>	<b>2,012</b>	<b>13,836</b>	<b>222,455</b>	<b>4,506</b>	<b>40,698</b>	<b>760,469</b>	<b>2,228</b>	<b>8,543</b>	<b>150,717</b>

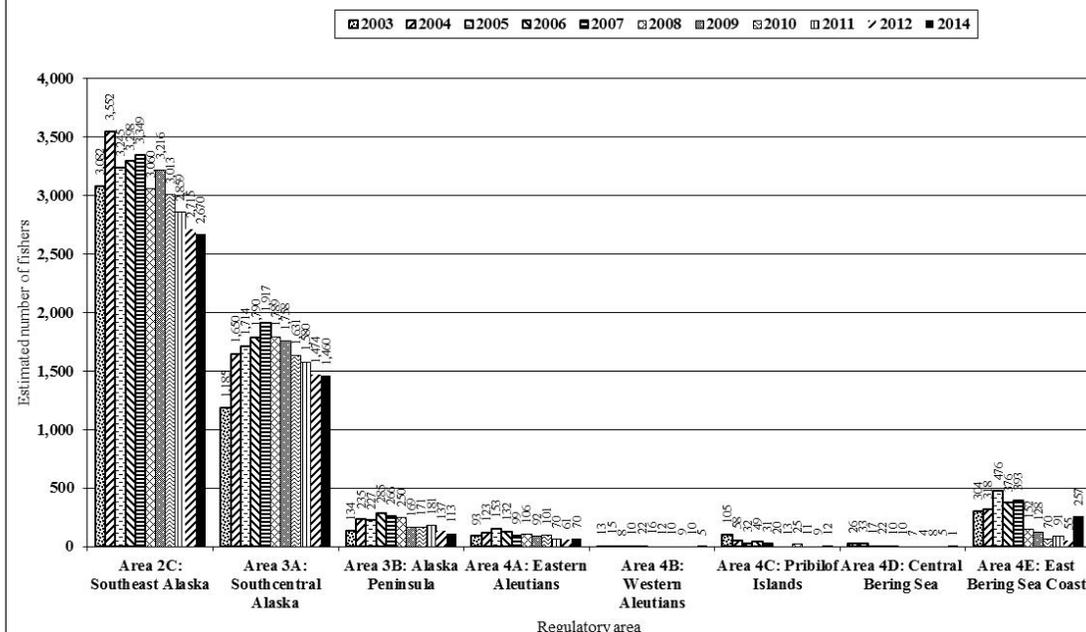
Source: ADP&GD/Division of Subsistence SHARC survey, 2015.

a. "Setline" = longline or skate, "Hand-operated gear" = rod and reel, or handline.

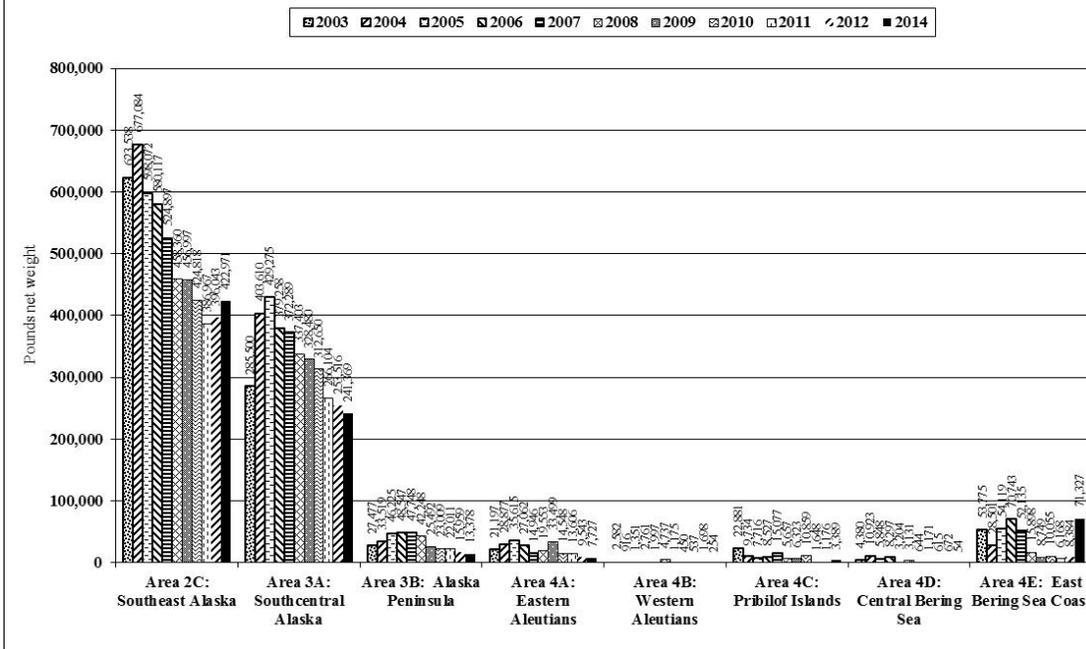
b. Weights given are "net weight." Pounds net (dressed, head off) weight = 75% of round (whole) weight.

c. Because fishers may fish in more than one area, subtotals for regulatory areas and the state total might exceed the sum of the subarea values.

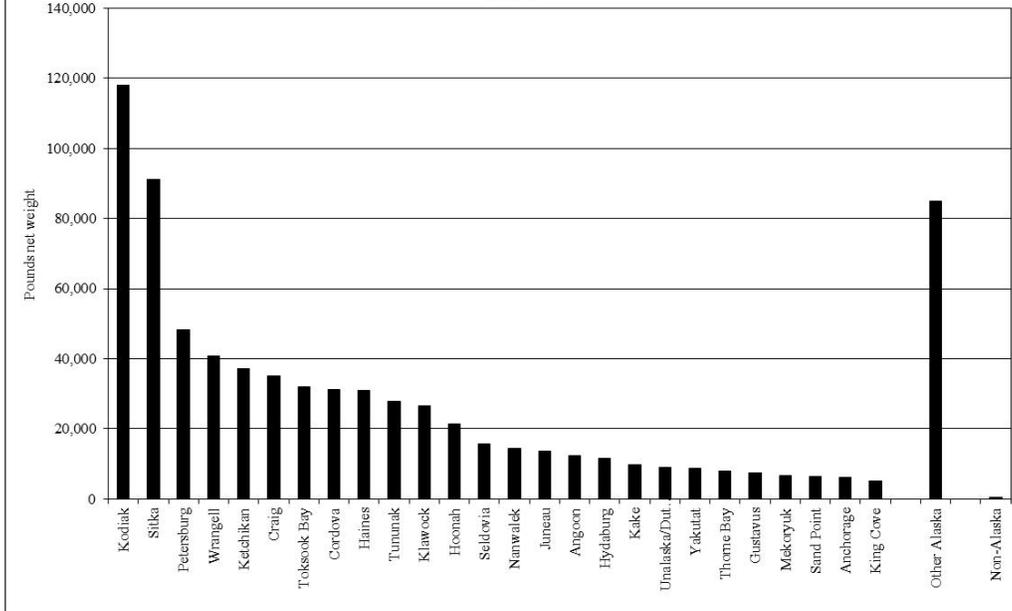
**Figure 8. Estimated number of Alaska subsistence halibut fishers, 2003 - 2012 & 2014 by regulatory area fished**



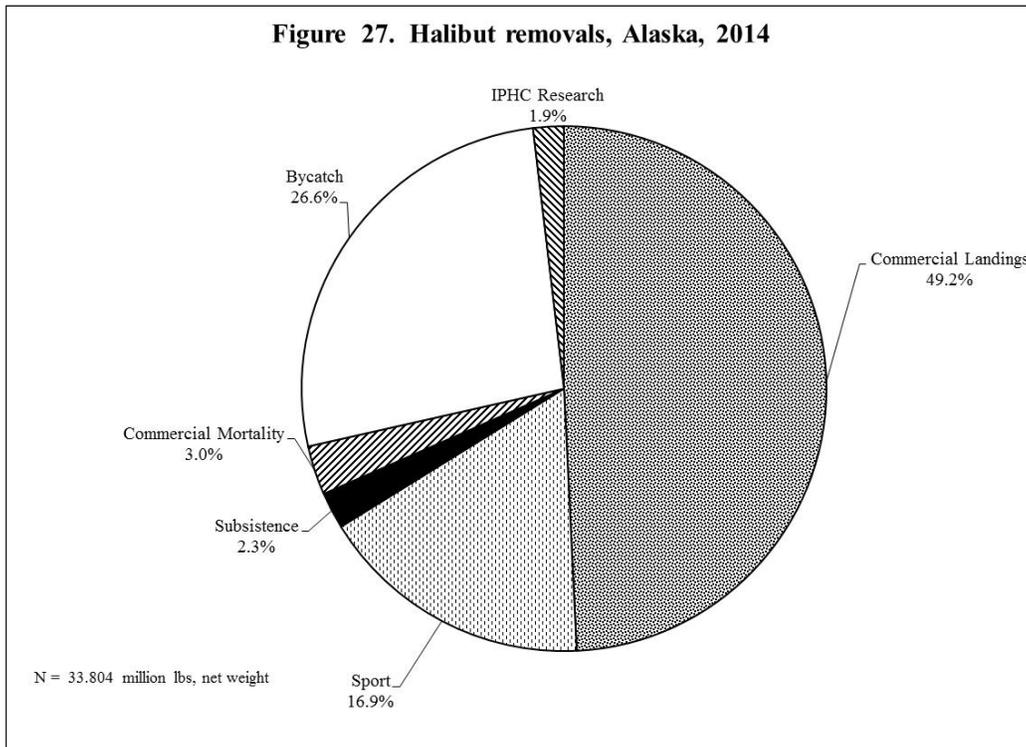
**Figure 16. Estimated subsistence halibut harvests, pounds net weight, by regulatory area fished, 2003 - 2012 & 2014**



**Figure 21. Alaska subsistence halibut harvests by place of residence, 2014**



**Figure 27. Halibut removals, Alaska, 2014**



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