

Technical Paper No. 357

**Subsistence Harvests of Pacific Halibut in Alaska,
2009**

by

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and

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January 2011

Alaska Department of Fish and Game

Division of Subsistence



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Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	<i>all commonly-accepted abbreviations;</i>		fork length	FL
deciliter	dL	<i>e.g., Mr., Mrs., AM, PM, etc.</i>		mid-eye-to-fork	MEF
gram	g	<i>all commonly-accepted professional</i>		mid-eye-to-tail-fork	METF
hectare	ha	<i>titles; e.g., Dr., Ph.D., R.N., etc.</i>		standard length	SL
kilogram	kg	Alaska Administrative Code	AAC	total length	TL
kilometer	km	Alaska Department of			
liter	L	Fish and Game	ADF&G		
meter	m	at	@	Mathematics, statistics	
milliliter	mL	compass directions:		<i>all standard mathematical signs, symbols</i>	
millimeter	mm	east	E	<i>and abbreviations</i>	
		north	N	alternate hypothesis	H _A
		south	S	approximately	~
Weights and measures (English)		west	W	base of natural logarithm	<i>e</i>
cubic feet per second	ft ³ /s	copyright	©	catch per unit effort	CPUE
foot	ft	corporate suffixes:		coefficient of variation	CV
gallon	gal	Company	Co.	common test statistics (<i>F, t, χ², etc.</i>)	
inch	in	Corporation	Corp.	confidence interval	CI
mile	mi	Incorporated	Inc.	correlation coefficient (multiple)	<i>R</i>
nautical mile	nmi	Limited	Ltd.	correlation coefficient (simple)	<i>r</i>
ounce	oz	District of Columbia	D.C.	covariance	cov
pound	lb	<i>et alii</i> (and others)	et al.	degree (angular)	°
quart	qt	<i>et cetera</i> (and so forth)	etc.	degrees of freedom	df
yard	yd	<i>exempli gratia</i> (for example)	e.g.	expected value	<i>E</i>
		Federal Information Code	FIC	greater than	>
Time and temperature		<i>id est</i> (that is)	i.e.	greater than or equal to	≥
day	d	latitude or longitude	lat. or long.	harvest per unit effort	HPUE
degrees Celsius	°C	monetary symbols (U.S.)	\$, ¢	less than	<
degrees Fahrenheit	°F	months (tables and figures):	first three	less than or equal to	≤
degrees kelvin	K	letters (Jan.,...,Dec)		logarithm (natural)	ln
hour	h	registered trademark	®	logarithm (base 10)	log
minute	min	trademark	™	logarithm (specify base)	log ₂ , etc.
second	s	United States (adjective)	U.S.	mean	\bar{x}
		United States of America (noun)	USA	minute (angular)	'
Physics and chemistry		U.S.C.	United States Code	not significant	NS
<i>all atomic symbols</i>		U.S. state	use two-letter abbreviations	null hypothesis	H ₀
alternating current	AC		(e.g., AK, WA)	percent	%
ampere	A			plus or minus	±
calorie	cal			population size	<i>N</i>
direct current	DC			probability	<i>P</i>
hertz	Hz			sample size	<i>n</i>
horsepower	hp			second (angular)	"
hydrogen ion activity (negative log of)	pH			standard deviation	σ or <i>s</i>
parts per million	ppm			standard error (of the mean)	<i>s</i> \bar{x}
parts per thousand	ppt, ‰			type I error probability	<i>P_a</i>
volts	V			type II error probability	<i>P_b</i>
watts	W			variance	σ ² or <i>s</i> ²

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ABSTRACT

This report describes the results of the seventh annual project to estimate the subsistence harvest of Pacific halibut *Hippoglossus stenolepis* in Alaska since 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). The survey response rate was 59% (6,944 surveyed of 11,733 SHARC holders.). An estimated 5,296 individuals participated in the subsistence fishery for halibut in 2009, compared to 5,303 in 2008; 5,933 in 2007; 5,909 in 2006; 5,621 in 2005; 5,984 in 2004; and 4,942 in 2003. The estimated harvest in 2009 was 45,434 halibut, comprising 861,359 lb (net weight) ($\pm 3.7\%$). This compares to a harvest estimate of 48,604 halibut, comprising 886,988 lb ($\pm 3.0\%$) in 2008; 53,697 halibut, comprising 1,032,293 lb ($\pm 4.1\%$) in 2007; 54,089 halibut comprising 1,125,312 lb ($\pm 2.9\%$) in 2006; 55,875 fish comprising 1,178,222 lb ($\pm 3.0\%$) in 2005; 52,412 fish comprising 1,193,162 lb ($\pm 1.5\%$) in 2004; and 43,926 halibut comprising 1,041,330 lb ($\pm 3.9\%$) in 2003. Of the total subsistence halibut harvested in 2009, 72% were harvested with setline gear and 28% with hand-operated gear. As in 2003–2008, the largest portion of the Alaska subsistence halibut harvest in 2009 occurred in Regulatory Area 2C (Southeast Alaska), 53%, followed by Area 3A (Southcentral Alaska), 38%. Subsistence harvests represented about 1.2% of the total halibut removals in Alaska in 2009. The harvest estimates based on the surveys for 2003–2009 serve as a basis for understanding the overall harvest, annual variability in catch, and whether any increase in harvest may be associated with implementation of the 2003 regulations. Although the 2009 harvest estimate is lower than the 2003–2008 estimates, there are no certain trends in the fishery based on these 7 project years. The report recommends that monitoring of the subsistence harvest of halibut in Alaska be continued.

Key words: Pacific halibut, *Hippoglossus stenolepis*, subsistence harvests, Alaska, rockfish, *Sebastes*, lingcod, *Ophiodon elongatus*.

EXECUTIVE SUMMARY

This report presents findings of a project designed to estimate the subsistence harvest of Pacific halibut *Hippoglossus stenolepis* in Alaska in 2009. The Alaska Department of Fish and Game (ADF&G) Division of Subsistence conducted the project under National Oceanic and Atmospheric Administration (NOAA) award number NA04NMF4370170 from the U.S. Department of Commerce, NOAA National Marine Fisheries Service (NMFS). In May 2003, NMFS published federal regulations implementing a subsistence halibut fishery in Alaska for qualified individuals who are residents of 118 rural communities or members of 123 Alaska Native tribes with traditional uses of halibut. The year 2009 was the seventh in which subsistence halibut fishing took place under these regulations. Subsistence fishers are required to obtain a Subsistence Halibut Registration Certificate (SHARC) from NMFS before fishing. During 2009, 11,733 individuals held SHARCs, compared to 11,565 at the end of 2008 (an increase of 1.5%); 15,047 at the end of 2008; 14,206 at the end of 2006; 14,306 at the end of 2005; 13,813 at the end of 2004; and 11,635 at the end of 2003. The number of valid SHARCs in 2009 was 13% below the previous 6-year average.

Harvest information was collected by means of a postal (mailed) survey. The one-page survey form was mailed to all SHARC holders in early 2010, with one follow-up mailing. Household visits supplemented the mailings in two communities in southeast Alaska. In total, 6,944 surveys were returned, a response rate of 59%. Participation in the survey was voluntary.

According to the project findings, an estimated 5,296 individuals participated in the subsistence halibut fishery in 2009, compared to an estimated 5,303 in 2008; 5,933 in 2007; 5,909 in 2006; 5,621 in 2005; 5,984 in 2004; and 4,942 in 2003. The estimated harvest in 2009 was 45,434 halibut ($\pm 3.3\%$) comprising 861,359 lb (net weight) ($\pm 3.7\%$). (“Net weight” is 75% of “round” or live weight; the estimated harvest was 1,148,479 lb round weight.) This compares to a harvest estimate of 48,604 halibut ($\pm 3.6\%$) comprising 886,988 lb (net weight) ($\pm 3.0\%$) in 2008; 53,697 halibut ($\pm 3.3\%$) comprising 1,032,293 lb ($\pm 4.1\%$) in 2007; 54,089 halibut ($\pm 2.8\%$) comprising 1,125,312 lb ($\pm 2.9\%$) in 2006; 55,875 fish ($\pm 3.0\%$) comprising 1,178,222 lb ($\pm 3.0\%$) in 2005; 52,412 fish ($\pm 1.6\%$) comprising 1,193,162 lb ($\pm 1.5\%$) in 2004; and 43,926 halibut comprising 1,041,330 lb ($\pm 3.9\%$) in 2003. As measured in pounds, the 2009 harvest was about 3% lower than the estimated harvest in 2008, and 20% lower than the previous 6-year average from 2003–2008.

Of the total subsistence halibut harvest in 2009, 621,873 lb (72%) were harvested with setline (stationary) gear (i.e., longlines, or “skates”) and 239,486 lb (28%) were harvested with hand-operated gear (i.e., rod and reel or handline). This was similar to the harvest by gear type in 2008 (74% setline and 26% hand-operated gear); 2007 (69% setline and 31% hand-operated gear); 2006 (70% setline and 30% hand-operated gear); 2005 (70% setline and 30% hand-operated gear), 2004 (74% setline and 26% hand-operated gear), and 2003 (72% setline and 28% hand-operated gear). Of those subsistence fishers using setline gear in 2009, the most (37%) usually fished with 30 hooks, the maximum number allowed by regulation in all areas except areas 4C, 4D, and 4E, where regulations establish no hook limit.

Subsistence fishers also harvested an estimated 13,315 rockfish *Sebastes* spp. and 3,390 lingcod *Ophiodon elongatus* in 2009 while fishing for halibut. In 2008, subsistence halibut fishers harvested an estimated 14,346 rockfish and 3,479 lingcod. In 2007, subsistence halibut fishers harvested an estimated 15,266 rockfish and 3,402 lingcod. In 2006, subsistence halibut fishers harvested an estimated 16,945 rockfish and 3,486 lingcod. In 2005, subsistence halibut fishers harvested an estimated 12,395 rockfish and 2,355 lingcod. In 2004, subsistence halibut fishers harvested 19,001 rockfish and 4,407 lingcod. In 2003, subsistence halibut fishers had an estimated incidental harvest of 14,870 rockfish and 3,298 lingcod.

Based upon fishing locations, the largest portion of the Alaska subsistence halibut harvest in 2009 occurred in Regulatory Area 2C (Southeast Alaska), 53% (456,997 lb); followed by:

- Area 3A (Southcentral Alaska), 38% (328,480 lb);

- Area 4A (Eastern Aleutian Islands), 4% (33,499 lb);
- Area 3B (Alaska Peninsula), 3% (25,492 lb);
- Area 4E (East Bering Sea Coast), 1% (8,749 lb);
- Area 4C (Pribilof Islands), less than 1% (6,323 lb);
- Area 4B (Western Aleutian Islands), less than 1% (1,175 lb); and
- Area 4D (Central Bering Sea), less than 1% (644 lb).

In 2003–2008 as well, Area 2C and Area 3A accounted for over 85% of the subsistence halibut harvests. The proportion of the statewide subsistence halibut harvest occurring in Area 2C declined to 53% in 2009, 52% in 2008, 51% in 2007, 52% in 2006, and 51% in 2005, compared to 57% in 2004 and 60% in 2003. Correspondingly, the portion occurring in Area 3A increased to 38% in 2009, 38% in 2008, 36% in 2007, 34% in 2006, 36% in 2005, and 34% in 2004, compared to 27% in 2003.

Preliminary data from the International Pacific Halibut Commission (IPHC) combined with the findings of this project indicate that 70.730 million pounds (net weight) of halibut were removed from Alaska waters in 2009. Of this total, the subsistence harvest accounted for 1.2%. Commercial harvests took 62.4% of the halibut, followed by bycatch in other commercial fisheries (22.7%), sport harvests (10.1%), and wastage in the commercial fishery (3.5%).

This report describes the results of the seventh annual project to estimate the subsistence halibut harvest in Alaska since NMFS adopted rules governing subsistence halibut fishing in May 2003. The harvest estimates based on the SHARC surveys for the 2003–2009 fishing seasons serve as a basis for understanding the overall harvest, annual variability in catch, and whether any increase in harvest may be associated with implementation of the new regulations. Demonstrating changes in the magnitude of the Alaska subsistence halibut harvest resulting from the new regulations using the results of the SHARC surveys for 2003–2009 is problematic, however, because of the limitations of earlier harvest estimates at the statewide level. The subsistence harvest estimates for 2003–2009 for some of the larger communities, such as Sitka, Petersburg, and Kodiak, which account for the majority of the harvest, are similar to harvest estimates based on household surveys prior to the new regulations. The higher overall harvest estimates for 2004–2006 compared to 2003 may be due to more thorough registration of subsistence fishers, hence better harvest documentation. The lower total harvest in net pounds in 2008 and 2009 compared to the previous 5 years appears to be the result of fewer registered SHARC holders, fewer estimated participants in the fishery, and a decline in the average size of the harvested halibut over the 7 years of the study, from 23.7 pounds per fish in 2003 to 18.2 lb per fish in 2008 and 19.0 lb per fish in 2009. Additional years of harvest data will be necessary to shed light on these and other factors that may shape the subsistence halibut harvest in Alaska.

The report concludes that 861,359 net pounds is a sound estimate of the Alaska subsistence halibut harvest in 2009. The estimate is based upon a scientific sampling of SHARC holders and a relatively high response rate. The total estimated harvest falls below the 1.5 million net pounds estimated for the subsistence 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). Although the 2009 harvest estimate was 20% below the average for the previous 6 project years, there are no certain trends in the harvest. The report recommends that monitoring of the subsistence halibut harvest in Alaska continue so that trends in the fishery in terms of participation, location of harvests, and harvest quantities can be better understood.

CHAPTER 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 2009 through a survey mailed to registered subsistence halibut fishers; the survey was supplemented by interviews in selected communities. This was the seventh year for which this research was conducted. (See Fall et al. 2004 for the results for 2003, Fall et al. 2005 for the results for 2004, Fall et al. 2006 for the results for 2005, Fall et al. 2007 for the results for 2006, Fall and Koster 2008 for the results for 2007, and Fall and Koster 2010 for the results for 2008.) The Division of Subsistence administered the project through a grant from NMFS (award number NA04NMF4370170).

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 NMFS, August 11, 2000 (NMFS 2000; see also NPFMC 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 International Pacific Halibut Commission (IPHC) halibut regulatory areas in Alaska.

In April 2003, the National Marine Fisheries Service, 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.¹ (See Appendix A for a list of eligible tribes and communities as they appeared in the Federal Register in 2003.) On November 4, 2009, the U.S. Department of Commerce published a final rule (74 FR 57105, November 4, 2009), effective December 4, 2009, modifying eligibility requirements for participation in the Alaska subsistence halibut fishery. The action allowed rural residents who live outside the boundaries of the specified 118 communities to participate if they live within the boundaries of rural areas defined in §300.65(g)(3).

Subsistence halibut fishers are required to obtain a Subsistence Halibut Registration Certificate (SHARC) from the Restricted Access Management Program (RAM) office of NMFS prior to fishing.² 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."

Table 1 provides population estimates for the eligible rural communities for 2000 based on the federal decennial census. The total population of these communities in 2000 was 82,707, of which 38,990 were Alaska Natives. As also shown in Table 1, estimates published by the State of Alaska for 2009 report a

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 16747).

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.

total population of 80,692 for eligible rural communities. In addition, the nonrural communities of Juneau and Ketchikan in 2000 had Alaska Native populations of 5,084 and 2,689, respectively (U.S. Census Bureau 2001), 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 the Kenai Peninsula Borough. Updated population estimates by ethnicity are not available.

PROJECT OBJECTIVES

The primary goal of the project was to estimate the subsistence harvest of halibut in Alaska in the calendar year 2009. Funding for 2009 (\$103,000), as for 2008, was reduced by about one-half compared to the first 5 years of the project. Consequently, the project plan for 2008 initially focused on estimating harvests only in regulatory areas 2C and 3A, where most of the harvests occur. However, because of lower costs of analysis and report preparation, due to the experience of conducting the survey for 5 years, and after evaluating available funds, it was decided to again produce a statewide estimate using a mailed survey to all SHARC holders. This goal was retained for 2009. However, as in 2008, outreach and supplemental interviewing in 2009 could occur only in a few communities in Area 2C. Therefore, the project objectives for 2009, listed below, were identical to the first 6 years of the project:

1. An estimate of the subsistence harvest of halibut in Alaska in 2009 by community, tribe, gear type, and IPHC regulatory area, along with an estimate of the number of individuals who subsistence fished for halibut in 2009.
2. An estimate of the harvest of halibut by SHARC holders while sport fishing in 2009.
3. An estimate of the number of lingcod *Ophiodon elongatus* and rockfish *Sebastes* spp. taken by subsistence fishers while subsistence fishing for halibut in 2009.

DATA COLLECTION METHODS

Public Outreach

In January 2010, the Division of Subsistence sent the report for project year 2008 (Fall and Koster 2010) to all eligible tribes, along with a short summary of the findings for 2008 and a letter informing them that the research would continue for the 2009 harvest year (Appendix B). In previous years, the division published announcements in local newspapers about the upcoming mailing of halibut survey forms to SHARC holders. Due to rising costs and the reduced budget, these announcements were not published for the 2009 study year. Information about the project was available on the NMFS web site for subsistence halibut fishing in Alaska (<http://www.fakr.noaa.gov/ram/subsistence/halibut.htm>).

Postal Household Survey

As noted, this was the seventh year of a harvest assessment program for the subsistence halibut fishery in Alaska. Because the subsistence halibut regulations came into effect in 2003, the first years of collecting harvest data were exploratory. Subsequent project years have built upon the lessons learned in the first years of the project and have benefited from outreach efforts to improve response rates. (See recommendations in Chapter 4.)

As recommended by Wolfe (2002), survey methodology was based upon a registration system for subsistence halibut fishers, that requires fishers to obtain a SHARC before fishing under federal subsistence halibut regulations. All 11,733 individuals who held a SHARC for any portion of 2009, as of December 31, 2009, were mailed a retrospective recall survey covering a 12-month harvest period: calendar year 2009. SHARCs issued to nontribal residents of eligible rural communities are valid for 2 years and tribal SHARCs are valid for 4 years, after which they must be renewed. Because of nonrenewals, the number of valid SHARCs for 2009 was down 22% from the 15,047 that were valid for 2007, but was very similar to the number of valid SHARCs for 2008 (11,565).

With one exception, the 2009 survey instrument was virtually identical to the form used for the 2003–2008 project years. It is based on recommendations by Wolfe (2002:Appendix A), with slight modifications such as project year and return address. (See Appendix C in this report for a copy of the 2009 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 2009; number of hooks usually set; and harvests of lingcod and rockfish taken while subsistence fishing for halibut. 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 2004–2009. Another 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.

A short explanatory letter with instructions on the back for completing the survey was included in the mailings (Appendix C). 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.

During an October 2003 meeting of the Alaska Native Subsistence Halibut Working Group (ANSHWG), held before the mailed survey for the first project year, community representatives expressed concern that not all fishers would know which fish were to be included under the category “rockfish” for the incidental harvest question on the survey. This would have led to an overestimation of this harvest if fishers reported fish such as Pacific cod *Gadus macrocephalus* or various species of sculpins in response to this question. The instructions mailed with the survey provided guidance on this question.³

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 11,733 SHARC holders occurred on February 20, 2010. The second mailing to 6,534 SHARC holders occurred on April 30, 2010. In previous study years, a third mailing took place, usually in April or May. Due to increasing printing and mailing costs, and the previous relatively low responses to this mailing, the third mailing did not occur in 2010.

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 D [FAQ], Appendix C [survey]).

³ The principal investigators for this project are aware that more than 30 species of rockfish inhabit Alaska waters. (See Alaska Administrative Code 5 AAC 39.975 for definitions of management assemblages of rockfishes.) The goal of this project was to keep the questions about incidental harvests simple. As discussed in the recommendations section (see Chapter 4), if more precise harvest data for various rockfish are needed for particular areas, future research should be designed and funded to address these data needs.

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. Because of the large number of eligible communities and tribes, it was not possible to conduct surveys in most communities. Additionally, because of reductions in the budget, surveys for 2009 harvests were limited to selected communities in Area 2C.

In the 2009 project year, the interviews were administered in Sitka and Hydaburg. Cooperative agreements with Sitka Tribe of Alaska and Hydaburg Cooperative Association supported interviewing in those communities. In each community, the surveys were administered face-to-face or by telephone.

SAMPLE ACHIEVEMENT

Table 3 reports sample achievement by tribe, rural community, and community of residence. Overall, 6,944 surveys were returned by 11,733 SHARC holders, a response rate of 59% (Figure 2). For residents of the 118 eligible rural communities who did not register as tribal members, 5,081 of 7,724 surveys were returned (66%). As shown in Figure 3, in 2009 there were 12 communities with more than 100 nontribal SHARC holders, accounting in total for 86% of all nontribal SHARCs issued in rural communities. Return rates were 60% or more in 11 of these communities; the return rate for Kodiak, the rural community with the most SHARC holders, was 56%.

Of the 4,009 individual tribal members who held SHARCs in 2009, 1,863 (46%) returned surveys. As shown in Figure 3, there were 17 tribes with more than 70 members who obtained SHARCs. Return rates for these 17 tribes varied widely, from 86% in Hydaburg (where the Hydaburg Cooperative Association conducted surveys to supplement the return of surveys by mail) to 34% in Ketchikan (where no directed outreach occurred). In total, these 17 tribes accounted for 69% of all tribal SHARCs.

Figure 4 illustrates survey response rates by place of residence of SHARC holders for the 22 communities with 100 or more SHARC holders in 2009. These communities accounted for 84% of all SHARCs and 85% of all returned surveys.

Figure 5 shows the survey return rate by response category (see also Table 3). After the first mailing, 5,321 surveys were returned, for a response rate of 45%. Responses to the second (final) mailing added 1,305 surveys, for a total response to the postal survey of 6,626 surveys, 56% of the 11,733 SHARC holders. In addition, surveys administered by representatives of tribal organizations working with ADF&G, added 318 surveys. Most of these were in Hydaburg and Sitka. This brought the total response to 6,944 surveys, 59% of all individuals who held SHARCs in 2009.

The overall response rate for the survey for 2009 decreased compared to 2008, from 63% to 59%. The return rate for 2003, the first year of the survey, was 65%; the return rate for 2004 was 62%; the return rate for 2005 was 60%; the return rate for 2006 was 59%; and the return rate for 2007 was 58%. The number of returned surveys increased over the first 3 years of the project, from 7,593 in 2003, to 8,524 in 2004, and 8,565 in 2005, reflecting the larger number of SHARC holders in 2004 and 2005 and the larger number of staff administered surveys in 2005. The total number of surveys dropped slightly in 2006, to 8,426, but increased again to 8,682 surveys in 2007, the largest annual total for the 7 years of the project. The number of surveys returned for 2008 dropped to 7,316, reflecting the sharp drop in the number of SHARC holders in 2008. For 2009, 6,944 surveys were received, the lowest total of the 7 years of the project.⁴ The response rate by mail declined during the first 5 years of the project, from 62% in 2003 to 59% in 2004, 55% in 2005, 52% in 2006, and 50% in 2007. In 2008, the response rate by mail increased to 60%, the highest since the first project year, but declined to 56% for 2009.

⁴ See Table 19 for sample sizes and fractions and selected project findings for the 7 project years.

As noted above, the 2009 study year was the first for which, due to increasing costs and a decreased budget, only two mailings of surveys occurred; three mailings had occurred in the previous 6 study years. Responses to the third mailing had dropped since the first years of the project, accounting for 10% of total returns in 2003 (1,211 surveys) and 14% in 2004 (1,970 surveys), compared to 4% in 2007 (599 surveys) and 4% in 2008 (473 surveys). Thus it is unlikely that eliminating the third mailing for 2009 had a significant effect on return rates or harvest estimates.

The number of surveys returned as “undeliverable” increased from 208 in 2003 (Fall et al. 2004:45), to 617 in 2004 (Fall et al. 2005:48), 613 in 2005 (Fall et al. 2006), 1,194 in 2006 (Fall et al. 2007:7), and 1,700 in 2007; there were 817 undeliverable surveys in 2008 and 653 in 2009 (Table 3). Subtracting “undeliverables” from the postal survey target gives a response rate by mail of 60% in 2009, compared to 63% in 2003, 62% in 2004, 57% in 2005, 57% in 2006, 54% in 2007, and 64% in 2008. Fewer surveys were administered in person or via telephone in 2009 (318) than any previous study year (range from 355 surveys in 2004 to 392 in 2003, 408 in 2008, 733 in 2005, 1,089 in 2007, and 1,522 in 2006). The lack of outreach and household surveys in Area 3A, Area 3B, and Area 4 communities in 2008 and 2009 due to budget reductions accounts for the reduced number of staff-administered surveys compared to 2005–2007.

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 Server⁵ at ADF&G in Anchorage to hold the survey data. The database structures included rules, constraints, and referential integrity to insure that data were entered completely and accurately. Data entry screens were available on a secure Internet site. Daily incremental backups of the database occurred, and transaction logs were backed up hourly. Full backups of the database occurred twice weekly. This ensured that no more than one hour of data entry would be lost in the unlikely event of a catastrophic failure.

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

Information was processed and analyzed using 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.

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.

⁵ Product names are included for scientific completeness and do not constitute an endorsement.

In general, estimates of harvests, levels of participation, and other findings were calculated based upon the application of weighted means (Cochran 1977). These calculations are standard methods for extrapolating sampled data. In this project, each tribe and rural community was a separate stratum for purposes of estimating total harvests. In most cases, the mean for returned SHARC surveys was applied to the total number of SHARCs issued for the tribe or community to calculate the estimated harvest. (See Appendix Table E-1 for the reported harvests for each tribe and community.) 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, 133 SHARCs were held by eligible tribal members living outside of Alaska. Of these, 73 postal surveys were returned from this group, and very few 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 2009, 1,559 rural and 339 tribal SHARCs expired and were not renewed; of those, 755 (48%) rural SHARCs and 73 (22%) tribal SHARCs participated in the survey.

Third, 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. Finally, in the responses from 2 tribes—St. Paul and Port Graham—one respondent in each group reported harvests far above the mean for other respondents. These SHARC holders were treated as separate strata so as not to overestimate harvests for these 2 tribes.

The RAM division issued one community harvest permit to a tribe in Area 3A that was valid in 2009. The holder of this permit reported no subsistence halibut harvests to RAM. No educational or ceremonial permits were issued for 2009. If harvests under any of these permits had occurred, the totals would have been added to the estimates for the tribe of the permit holder because they are not reported by individuals in their response to the SHARC postal survey.

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. 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 E-4, E-5, and E-6 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*%):

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

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

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_i = tribal or community sample size

N_i = tribal or community population size

t_{α/2} = Student's *t*-statistic for alpha level ($\alpha=.95$) 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. 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, and staff administered surveys) (see Appendix Table E-2).

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 $0.75 \times \text{round weight} = \text{net weight}$.⁶

Products

The public review draft of this final report was completed in November 2010 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 2010 meeting of the NPFMC in Anchorage, Alaska. A meeting of the ANSHWG did not take place in December 2010. 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 F). The summary was sent to tribal government representatives and other interested individuals and groups. This report was posted on the Division of Subsistence web site and the RAM 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.

⁶ The factor of 0.75 for converting halibut round weight to net weight is the standard used by the International Pacific Halibut Commission and the ADF&G Division of Sport Fish. Division of Subsistence studies, as reported in the Technical Paper series and in the Community Subsistence Information System (<http://www.subsistence.adfg.state.ak.us/CSIS/>), hereinafter referred to as CSIS, and formerly the Community Profile Database [Scott, C.L., B. Brown, G.B. Jennings, and C. Utermohle. *Unpublished*. Community Profile Database, 2001, for Microsoft Access 2000. Version 3.12. Alaska Department of Fish and Game Division of Subsistence, Juneau. Hereinafter referred to as CPDB.], generally use a factor of 0.72 for converting halibut round weights to net weights, based on Crapo et al. 1993:7), who reports 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.”

CHAPTER 2: FINDINGS

SUBSISTENCE HALIBUT HARVESTS IN 2009

Estimated Number of Subsistence Halibut Fishers

Of the 11,733 individuals who held valid SHARCs for any portion of 2009, an estimated 5,296 (45%) participated in the subsistence halibut fishery in 2009 (Table 4, Figure 6). Of the 4,009 individuals who held SHARCs as members of an eligible tribe, an estimated 1,549 participated in the fishery (39%). Of the 7,724 individuals who held SHARCs as residents of qualifying rural communities, an estimated 3,748 (49%) participated in the subsistence fishery for halibut in 2009. In 2008, 5,503 of 11,565 SHARC holders fished in the subsistence halibut fishery (46%), including 1,595 of 4,316 tribal SHARC holders (37%) and 3,708 of 7,224 rural SHARC holders (51%). In 2007, 5,933 of 15,047 SHARC holders fished in the subsistence halibut fishery (39%), including 2,222 of 7,446 tribal SHARC holders (33%) and 3,710 of 7,601 rural SHARC holders (51%). In 2006, 5,909 of 14,206 SHARC holders fished in the subsistence halibut fishery (42%), including 2,329 of 7,123 tribal SHARC holders (33%) and 3,580 of 7,083 rural SHARC holders (51%). In 2005, 5,621 of 14,306 SHARC holders fished in the fishery (39%) including 2,035 of 6,437 tribal SHARC holders (32%) and 3,349 of 7,869 nontribal rural SHARC holders (43%). In 2004, 5,984 of 13,813 SHARC holders participated in the fishery (43%), including 2,157 of 6,533 tribal SHARC holders (33%) and 3,827 of 7,280 nontribal rural SHARC holders (53%). In 2003, 4,924 of 11,635 SHARC holders participated in the subsistence fishery (42%), including 1,836 of 5,578 tribal SHARC holders (33%) and 3,106 of 6,057 nontribal rural SHARC holders (51%) (Figure 6).

In 2003–2007, differences in the demography of tribal SHARC holders and rural SHARC holders probably accounted for some of the differences in the rate of participation in the subsistence halibut fishery between these 2 groups. As a proportion of total SHARC holders, about twice as many tribal SHARC holders were under 20 years of age compared to rural SHARC holders. This may reflect a policy on the part of some eligible tribes to register all or most tribal members, including younger people who were less likely to participate in the subsistence fishery than adults. Despite the substantial drop in the number of tribal SHARC holders in 2008 and 2009, differences in the age structure of this group compared to rural SHARC holders remained. For example, in 2007, 13% of tribal SHARC holders were younger than 20 years of age, compared to 5% of rural SHARC holders (Fall and Koster 2008:11). In 2009, 11% of tribal SHARC holders less than 20 years of age, compared to 6% of rural SHARC holders (Table 5, Figure 7). This difference persisted despite the decline of tribal SHARC holders in Toksook Bay from 534 in 2007 (35% of whom were less than 20 years old) to just 34 in 2008 (18% under age 20) and 33 in 2009 (18% under age 20).

As illustrated in Figure 8 (see also, Table 4), the largest number of Alaska subsistence halibut fishers in 2009 were from tribes and rural communities in Regulatory Area 2C (Southeast Alaska), 3,187 (60%). There were 1,669 subsistence halibut fishers (32%) from tribes and communities in Regulatory Area 3A (Southcentral Alaska); 189 (4%) from Regulatory Area 3B (Alaska Peninsula) tribes and communities; and 137 (3%) from Area 4E (East Bering Sea Coast) tribes and communities. Additionally, there were 114 (2%) halibut fishers who were members of tribes and residents of communities in the four other regulatory areas. As also shown in Figure 8, the distribution of subsistence fishers by regulatory area in 2009 was similar to that of 2003–2007, except, continuing the pattern established in 2008, there was a sharp decrease in the number of halibut fishers in Area 4E, from 376 in 2007 to 143 in 2008 and 137 in 2009. Compared to 2008, the estimated number of halibut fishers from tribes and rural communities in all the other regulatory areas also dropped, most notably in Area 3B (from 253 fishers to 189, a drop of 25%) and Area 4A (from 96 fishers to 79 fishers, a drop of 18%). The estimated number of subsistence halibut fishers in Area 3A dropped by 3% (from 1,712 in 2008 to 1,669 in 2009). In contrast, the estimated number of subsistence halibut fishers rose in Area 2C, from 3,057 in 2008 to 3,187 in 2009 (a 4% increase).

Alaska Native tribes with the most subsistence halibut fishers in 2009 included the Central Council of Tlingit and Haida Indians (166 subsistence halibut fishers), the Ketchikan Indian Corporation (148), the Sitka Tribe of Alaska (109), the Shoonaq' Tribe of Kodiak (82), the Hydaburg Cooperative Association (61), the Hoonah Indian Association (47), the Wrangell Cooperative Association (42), the Agdaagux Tribe of King Cove (41), the Qagan Toyagungin Tribe of Sand Point (40), and Angoon Community Association (40). Of the SHARC holders who registered as residents of eligible rural communities, the most subsistence fishers lived in Kodiak (835), followed by Sitka (717), Petersburg (383), Haines (266), Wrangell (234), Craig (213), and Cordova (212). Appendix Table E-3 provides details for each tribe and community regarding participation in the subsistence fishery and subsistence halibut harvests in 2009.

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 2009 by community can be obtained. Appendix Table E-4 provides project findings based on place of residence. Communities with 100 or more resident SHARC holders who participated in the subsistence halibut fishery in 2009 were Kodiak (923), Sitka (844), Petersburg (418), Wrangell (287), Haines (286), Craig (284), Cordova (234), Ketchikan (208), and Hoonah (109). Of the 9 Alaska communities with 100 or more subsistence halibut fishers in 2009, 6 had about the same or fewer fishers than in 2008 ($\pm 10\%$). The estimated number of subsistence halibut fishers in Wrangell increased by 11%, in Haines by 14%, and in Ketchikan by 16%. Sand Point had an estimated 70 subsistence halibut fishers in 2009, a drop of 46% from the estimate of 130 fishers in 2008 (Figure 9). (See Chapter 3 for further discussion of Kodiak, Petersburg, Cordova, and Sand Point as case study communities.) Six non-Alaska-resident tribal SHARC holders subsistence fished for halibut in Alaska in 2009, compared to 3 in 2008, zero in 2007, 7 in 2006, zero in 2005, 24 in 2004, and 5 in 2003.

Estimated Alaska Subsistence Halibut Harvests in 2009 by SHARC Type and IPHC Regulatory Area

Table 4 reports estimated Alaska subsistence halibut harvests for 2009 by SHARC type, IPHC regulatory area, and gear type. The total estimated subsistence halibut harvest in Alaska in 2009 was 45,434 fish ($\pm 3\%$) for 861,359 lb (net weight) ($\pm 4\%$).⁷ As estimated in pounds net weight, 53% of the subsistence halibut harvest (457,734 lb [$\pm 4\%$]) was taken by fishers registered with tribes or rural communities in Regulatory Area 2C (Figure 10). (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 tribes and rural communities harvested 334,446 lb ($\pm 7\%$) (39% of the state total). Harvests totaled 31,518 lb ($\pm 16\%$) (4%) for communities and tribes of Regulatory Area 3B. For tribal and rural SHARC holders in Area 4A, the estimated harvest was 17,400 lb ($\pm 22\%$) (2% of the net harvest weight). For Regulatory Area 4E,⁸ the estimated harvest for tribal and rural SHARC holders was 11,083 lb ($\pm 29\%$) (1% of the net harvest weight). For Regulatory Area 4C, the estimated harvest for tribal and rural SHARC holders was 7,280 lbs ($\pm 136\%$) (1% of the net harvest weight). Tribes and communities in 4B harvested 1,107 lbs ($\pm 98\%$) (less than 1% of the net harvest weight) and those in 4D harvested 790 lb ($\pm 78\%$) (less than 1%).

⁷ This approximates 1,148,479 pounds round (live or whole) weight. See footnote 6 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 2009, a total of 11,259 pounds net weight of halibut was retained by 3 organizations: Coastal Villages Regional Fund (4,277 pounds), Bristol Bay Economic Development Corporation (922 pounds), and Norton Sound Economic Development Corporation (6,060 pounds) (Williams 2010). The IPHC includes these fish within the "personal use" removal category, a category that also includes subsistence harvests (Gilroy 2005:64). See also the section in Chapter 3, "Comparisons with Nonsubsistence Harvests."

The estimated subsistence harvest of 861,359 pounds of halibut in 2009 represents a decrease of 2.9% compared to the estimated harvest of 886,988 lb in 2008 (Figure 11). Harvests by tribal SHARC holders decreased by 3.4% from 322,980 lb in 2008 to 311,947 lb in 2009. Tribal SHARC holders harvested 36% of the Alaska subsistence halibut harvest in 2009, compared to 36% in 2008. Subsistence halibut harvests by nontribal, rural resident SHARC holders decreased by 2.6%, from 564,007 lb in 2008 to 549,412 lb in 2007. This group accounted for 64% of the statewide subsistence halibut harvests in 2009, compared to 64% in 2008.

Members of 71 Alaska tribes harvested subsistence halibut in 2009. In 4 others, SHARC holders fished but had no harvest. In 12 others, tribal members obtained SHARCs and returned surveys, but no one fished. Members of 11 other tribes held SHARCS, but no one returned a survey form. No one in the remaining 25 eligible tribes held a valid SHARC in 2009. All but one of these tribes was in Regulatory Area 4E (East Bering Sea Coast). As shown in Figure 12, members of the 12 tribes with harvests of 8,000 lb or more accounted for 59% of the total subsistence halibut harvest by tribal SHARC holders in 2009. These 12 tribes accounted for 53% of the tribal SHARCs (2,128 of 4,009). Members of the other 59 tribes with harvests accounted for about 41% of the total harvest by tribal members.

Residents of 53 eligible rural communities harvested subsistence halibut in 2009.⁹ In 5 others, SHARC holders fished unsuccessfully. In 10 others, individuals obtained SHARCs but no one fished. Residents of 11 other eligible rural communities obtained SHARCs, but no one returned a survey form. No one in the remaining 39 eligible rural communities held a valid SHARC as a nontribal member in 2009. Most of these communities (34) were in Regulatory Area 4E (East Bering Sea Coast).¹⁰ As shown in Figure 13, eleven rural communities with harvests of over 10,000 lb accounted for 83% of the subsistence halibut harvest by the holders of rural (nontribal) SHARCs in 2009. Residents of the other 42 communities with harvests accounted for 16% of the total harvest by rural SHARC holders.

As also shown in Figure 13, rural SHARC holders from 2 communities accounted for 45% of the total harvest by this group in 2009: Kodiak (30%) and Sitka (15%). Adding Petersburg, the next highest rural community harvest at almost 8%, the top 3 rural communities accounted for over one-half (52%) of the rural community (nontribal) subsistence halibut harvest in Alaska in 2009.

Estimated Alaska Subsistence Halibut Harvests in 2009 by Harvest Location

Survey respondents were asked to report the “water body, bay, or sound [that they] usually fished” for subsistence halibut in 2009. Multiple responses were permitted. In Table 6, estimated subsistence halibut harvests are reported for the 8 Alaska halibut regulatory areas and 21 subdivisions within these areas. It should be noted that regulatory area totals in Table 6 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 53% of the Alaska subsistence halibut harvest in 2009 (456,997 lb [net weight]) (Figure 14, Table 6). Also, 3 of the 5 geographic subareas with the largest subsistence halibut harvests in 2009 were in Area 2C: southern Southeast Alaska (262,046 lb [net weight]; 30% of the state total); the northern Southeast Alaska other than the Sitka Local Area Management Plan (LAMP) area (105,139 lb; 12%), and the Sitka LAMP area (89,812 lb; 10%), and as shown in Figure 15 and Figure 16.¹¹ Regulatory Area 3A (Southcentral Alaska) ranked second, with 38% of the state’s total subsistence halibut harvest (328,480 lb [net weight]). Waters

⁹ In this tally, Chiniak, listed separately in tables in this report, is counted as part of Kodiak, as it is for eligibility.

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.

bordering the Kodiak Island road system (including Chiniak Bay) ranked second among subareas, with a subsistence halibut harvest of 108,049 lb (13% of the state total), and other Kodiak Island waters not along the road system area (“Kodiak Island–Other”) ranked fourth (91,202 lb; 11%). Harvests within Cook Inlet waters of Area 3A accounted for 9% of the state total (81,043 lb) (ranking sixth), those within Prince William Sound added 33,796 lb (4% of the statewide total), and the Yakutat Area added 14,390 lb (2%). Among regulatory areas, Area 4A (eastern Aleutian Islands) ranked third with 4% of the Alaska total (33,499 lb). Area 3B (Alaska Peninsula, including the Chignik Area) ranked fourth with 25,492 lb (3%), and Area 4E (Bering Sea Coast) ranked fifth with 8,749 lb (1%). Most of the harvest in Area 4E came from the Yukon–Kuskokwim Delta area, with a smaller amount from Norton Sound and, for the first time since the harvest monitoring project began in 2003, no harvest from Bristol Bay. Area 4C (Pribilof Islands) ranked sixth with 6,323 lb (2%), Area 4B (western Aleutian Islands) added 1,175 lb (<1%); and Area 4D (St. Lawrence Island) added 644 lb (<1%).

Figure 17 reports estimated harvests in pounds net weight by location fished at the regulatory area level in 2003–2009. Table 7 compares estimated subsistence halibut harvests by regulatory area and geographic area in 2009 with those estimated for 2003–2008 and for the 6-year average from 2003–2008. As noted previously, for the state overall, the estimated harvest in pounds decreased by about 3% in 2009 from 2008 (Figure 18). The estimated harvest in 2009 was 20% lower than average for the first 6 years of the subsistence halibut harvest monitoring program (2003–2008) (Figure 19).

Estimated subsistence halibut harvests decreased in 6 of the 8 regulatory areas in 2009 compared to 2008 (Figure 17; Figure 18; Table 7). As in the first 6 years of the project, Area 2C (Southeast Alaska) accounted for the most subsistence halibut harvests in 2009 (456,997 lb; 53% of the state total); this harvest represents a small decrease of 0.3% compared to 2008 (Table 7; Figure 17; Figure 18), but a 21% decrease compared to the 6-year average from 2003–2008 (Figure 19). The percentage of the total statewide subsistence halibut harvest that took place in Area 2C in 2009 was 53%, similar to 2008 (52%), 2007 (51%), 2006 (52%), and 2005 (51%), but a decline compared to 57% in 2004 and 60% in 2003. Harvests increased in 2 subareas within Area 2C in 2009 compared to 2008, with a 3% increase in the southern Southeast Alaska subarea and a 6% increase in the northern Southeast Alaska subarea (excluding the Sitka LAMP). However, a 14% decrease in harvests occurred in the Sitka LAMP area from 2008 to 2009. Harvests were down in all 3 Southeast subareas compared to recent 6-year averages: 14% in southern Southeast Alaska, 36% in the Sitka LAMP, and 20% 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.¹²

Estimated harvests in Area 3A (Southcentral Alaska) dropped by 3% (from 337,403 lb in 2008 to 328,480 lb in 2009), for the fourth straight year. The estimated subsistence halibut harvest in Area 3A in 2009 was 11% lower than the previous 6-year average (Figure 19). In contrast to the last 4 years, in terms of total pounds, the largest increase in estimated harvests over the first 3 years of the project took place in Area 3A, where the 2005 harvest of 429,275 lb was 6% higher than the estimate for 2004 (403,610 lb) and 50% higher than the estimate for 2003 (285,500 lb) (Table 7). Area 3A accounted for 38% of the statewide subsistence halibut harvest in 2009, 38% in 2008, 36% in 2007, 34% in 2006, 36% in 2005, and 34% in 2004, compared to 27% in 2003 (Table 7). In Area 3A in 2009 compared to 2008, subsistence halibut harvests increased in the portion of Kodiak Island along the road system by 12%, and in the Cook Inlet area by 6%. Decreases in harvests occurred in the waters of Kodiak Island off the road system (down 9%), Prince William Sound (down 28%), and the Yakutat area (down 11%) (Table 7). However, only in Cook Inlet were harvests in 2009 higher than the previous 6-year average (up 14%).

There was a relatively large decrease of 40% in Area 3B (Alaska Peninsula) harvests from 2008 (42,248 lb) to 2009 (25,492 lb) (Figure 17; Figure 18; Table 7). In Area 3B, the 2009 estimated harvest was the

¹² Further discussion of differences between harvest estimates for 2003–2009 appears in Chapter 3 and Chapter 4.

lowest of the 7 years of the project, 38% below the previous 6-year average, and notably below the estimates for 2005 (46,225 lb), 2006 (48,547), and 2007 (47,748 lb) (Table 7; Figure 17; Figure 19). Earlier reports (e.g. Fall and Koster 2010:12) suggested that improved participation in the SHARC program in 2006, 2007, and 2008 accounted for some of the increase in the estimated harvests in Area 3B in 2005–2008, 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, a decline in program participation that may partially explain the lower harvest estimate for 2009 (see discussion of Sand Point in Chapter 3).

Area 4A (Eastern Aleutians) was one of only 2 regulatory areas with increased subsistence halibut harvests in 2009 compared to 2008. Area 4A had the largest proportional increase of 71%, from 19,553 lb in 2008 to 33,499 lb in 2009. The harvest in 2009 was 37% higher than the previous 6-year average (Figure 19). 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). 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, accounts for most of the change in the regulatory area's estimate between the 2 years. (See below for more discussion of harvest estimates for Unalaska–Dutch Harbor.)

In Area 4B (Western Aleutians) there was a large decrease of 75% in the estimated subsistence harvest of halibut in 2009 (1,175 lb) compared to 2008 (4,737 lb) (Table 7; Figure 17; Figure 18). The 2008 estimate 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 2008 (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, below). The estimated harvest was 51% below the previous 6-year average (Figure 19), and lower than any other year except 2004.

Estimated subsistence harvests of halibut in Area 4C (Pribilof Islands) rose 12% in 2009 to 6,323 lb, from 5,657 lb in 2008 (Figure 17, Figure 18, Table 7). The 2009 was 46% below the previous 6-year average, however (Figure 19). As noted in reports for previous project years (Fall et al. 2005:15; Fall and Koster 2008:15), a high response rate to the survey, based 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 or 2009. The number of valid SHARCs held by St. Paul residents dropped from 246 in 2007 to 42 in 2008 and 44 in 2009, and the response rate to the survey declined from 83% in 2007 to 45% in 2008 and 34% in 2009. However, the estimated number of subsistence halibut fishers in the community remained about the same: 14 in 2007, 15 in 2008, and 16 in 2009.

Compared to 2008, the largest proportional decrease in subsistence halibut harvests occurred in Area 4D (Central Bering Sea), from 3,131 lb in 2008 to 644 lb in 2009, a decline of 79%. The 2009 estimate was 89% lower than the previous 6-year average for Area 4D (Figure 17; Figure 18; Figure 19; Table 7). It is likely that this sharp drop in the harvest estimate for Area 4D 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.

As in Area 4D, declining registration of subsistence halibut fishers in the SHARC program may also be a primary cause of lower harvest estimates in Area 4E (East Bering Sea Coast), where the estimated harvest of 8,749 lb was a 45% decrease from the 15,898 lb estimated for 2008 (Figure 17; Figure 18; Table 7). The 2009 harvest was 81% lower than the 6 year average from 2003–2008 (Figure 19). Lower harvest

estimates for this area are likely in part attributable to the substantial drop in valid SHARCs held by tribal members and rural community residents of Area 4E, from 1,191 in 2007 to 421 in 2008 and 374 in 2009. Also, unlike 2003–2007, no outreach, face-to-face interviewing, or telephone calls took place in Area 4E communities in 2008 or 2009, resulting in lower response rates in several communities compared to previous years. For example, response rates dropped in Toksook Bay from 41% (218 of 533 SHARCs) in 2007 to 32% (11 of 34 SHARCs) in 2008 and 39% in 2009 (13 of 33); and in Tununak, from 64% (44 of 69 SHARCs) in 2007, to 10% (7 of 68 SHARCs) in 2008, and 55% (6 of 11 SHARCs) in 2009.

Figure 20 illustrates the average subsistence halibut harvest in pounds net weight for those SHARC holders who subsistence fished in 2009. Figure 21 illustrates the average harvest per fisher in numbers of halibut. For the state overall, the average subsistence halibut fisher harvested 163 lb (net weight) or about 8.6 halibut in 2009. Average harvests per fisher at the regulatory area level ranged from 68 lb (net weight) in Area 4E to 493 pounds per fisher in Area 4D. Average subsistence halibut harvests were lower in 2009 than in any of the previous 6 years. In 2003, subsistence fishers on average harvested 8.9 halibut (211 lb) (Fall et al. 2004:12–13); in 2004 the average harvests were 8.8 halibut and 199 lb (Fall et al. 2005:15); in 2005, the average harvests were 9.9 halibut and 210 lb (Fall et al. 2006: 17); in 2006, average harvests were 9.2 halibut and 190 lb (Fall et al. 2007:18); in 2007, the averages were 9.1 halibut and 174 net pounds harvested per fisher (Fall and Koster 2008:16); and in 2008, average harvests were 9.2 halibut and 167 lbs (Fall and Koster 2010:13).

Subsistence Halibut Harvests by Place of Residence

As shown in Figure 22, there were 24 Alaska communities whose residents had combined estimated subsistence halibut harvests of approximately 7,000 lb or more (net weight) in 2009. 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.¹³ Residents of these communities accounted for 86% of the total Alaska subsistence halibut harvest in 2009. 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 21% of the total Alaska harvest, and Sitka ranked second with about 11%. With 13,129 and 8,627 residents, respectively, these 2 communities included about 27% of the population of rural communities eligible to participate in the subsistence fishery. There were 100 other Alaska communities with at least one resident who participated in the subsistence halibut fishery in 2009. The total harvest for these other communities represented about 14% of the state total.

For 2009, 133 SHARC holders provided out-of-state addresses from 104 communities in 23 states, provinces, and territories.¹⁴ Seattle was the non-Alaska community with the most SHARC holders, with 4. Six non-Alaska resident SHARC holders subsistence fished for halibut in 2009, with a harvest of 22 fish and 525 lb (0.06% of the state total) (see Appendix Table E-4). In 2008, three non-Alaska residents participated in the subsistence halibut fishery, with a harvest of 13 fish and 237 lbs (0.03% of the state total). In 2007, no non-Alaska resident SHARC holders participated in the Alaska subsistence halibut fishery. In 2006, seven non-Alaska resident SHARC holders subsistence fished for halibut, reporting a harvest of 72 fish and 2,346 lb (net weight) (0.2% of the state total). No non-Alaska resident SHARC holders subsistence fished for halibut in 2005. In 2004, twenty-four non-Alaska residents reported subsistence fishing for halibut in Alaska, with an estimated total harvest of 169 fish and 4,845 lb (net weight) (about 0.4% of state total). In 2003, five non-Alaska residents participated in the Alaska subsistence halibut fishery, harvesting 5 fish.

¹³ Note that nonrural places, such as Anchorage, Juneau, Ketchikan, and Valdez, appear in Figure 22 and in Appendix Tables E-4, E-5, and E-6, because members of eligible Alaska Native tribes may participate in the fishery regardless of where they live.

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

Subsistence Harvests by Gear Type

Table 6 and Figure 23 report the estimated subsistence harvests of halibut in Alaska in 2009 by gear type and regulatory area fished. In total, 621,873 lb (72%) 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 239,486 lb (28%) were harvested using hand-operated gear (i.e., handlines or lines attached to a rod or pole). There were notable differences between regulatory areas (Table 6, Figure 23). Harvests using setline gear predominated in Area 2C (Southeast Alaska) (80% of the area’s total subsistence harvest), 3A (Southcentral Alaska) (66%), Area 4A (Eastern Aleutian Islands) (64%), Area 4C (Pribilof Islands) (63% setline gear), and 4D (Central Bering Sea). In contrast, hand-operated gear accounted for most of the subsistence halibut harvests in Area 4B (Western Aleutian Islands) (71%), Area 3B (Alaska Peninsula) (56%), and Area 4E (East Bering Sea Coast) (54%). In 2008, 74% of the total Alaska subsistence halibut harvest was taken with setline gear and 26% with hand-operated gear (Fall and Koster 2010:14). In 2007, 69% of the total Alaska subsistence halibut harvest was taken with setline gear and 31% with hand-operated gear (Fall and Koster 2008:16–17). In 2006, 70% of the total Alaska subsistence halibut harvest was taken with setline gear and 30% with hand-operated gear (Fall et al. 2007:18–19). In 2005 also, 70% of the total Alaska subsistence harvest was taken with setline gear and 30% with hand-operated gear (Fall et al. 2006: 18). In 2004, 74% of the Alaska subsistence halibut harvest was taken with setline gear and 26% with hand-operated gear (Fall et al. 2005:16). In 2003, 72% was taken with setline gear and 28% with hand-operated gear (Fall et al. 2004:13).

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.” The findings by regulatory area are reported in Table 8. For the fishery overall, most setline fishers (37%) 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 24). The next most frequently reported number was 20 hooks, usually used by 19% of the fishers who used setline gear. Fifteen hooks (11%) ranked third, followed by 25 hooks (8%) and 10 hooks (8%). This pattern is similar to that recorded for 2008, when 42% of setline fishers used 30 or more hooks and 19% used 20 hooks (Fall and Koster 2010:14–15); 2007, when 41% of setline fishers used 30 or more hooks and 19% used 20 hooks (Fall and Koster 2008:17); 2006, when 38% of setline fishers used 30 or more hooks and 20% used 20 hooks (Fall et al. 2007:19); 2005, when 42% of setline fishers used 30 or more hooks and 20% used 20 hooks (Fall et al. 2006:18–19); 2004, when 44% of setline fishers used 30 hooks and 19% used 20 hooks (Fall et al. 2005:16), and 2003, when 43% of setline fishers used 30 hooks and 20% used 20 hooks (Fall et al. 2004:13).

Thirty was the most frequently used number of hooks with setline gear in 6 of the 8 regulatory areas (Table 8): 2C (Southeast Alaska), 37%; 3A (Southcentral Alaska), 38%; 3B (Alaska Peninsula), 35%; 4A (Eastern Aleutian Islands), 37%; Area 4C (Pribilof Islands), 100%; and 4E (East Bering Sea Coast), 31%. In Area 4B (Western Aleutians), 59% of fishers who used setline gear used 10 hooks. In Area 4D (Central Bering Sea), 82% of setline fishers used 20 hooks.

Number of Subsistence Halibut Fishing Trips

For the first time, survey respondents were asked to report the number of subsistence fishing trips they took for halibut in the 2009 study year. The average number of trips for subsistence halibut fishers was 4.7, with those holding tribal SHARCs averaging 5.5 trips and those holding rural SHARCs averaging 4.5 trips. In most regulatory areas, the average subsistence fisher took between 4 and 5 trips, with higher averages in Area 4D (average of 7.0 trips) and Area 4C (average of 13.3 trips) (Figure 25). As shown in Figure 26, about 75% of fishers took 5 or fewer trips, and about 18% took between 6 and 10 trips. Six 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 2009 was 1.8, with tribal SHARC holders averaging 1.9 fish and rural SHARC holders averaging 1.7 fish. The highest average harvests per trip occurred among tribal SHARC holders in Area 4B (4.1 halibut per trip) and Area 4A (3.1 halibut per trip) (Figure 27).

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 2009.” 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. 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 2009, they would be expected to report only their sport caught halibut and not include any halibut they reported as subsistence harvests, even if taken with rod and reel or handheld line with two or fewer hooks. Note that the project findings do not represent the total recreational halibut harvest by residents of eligible communities and tribes in 2009, because individuals from these tribes and communities who did not obtain SHARCs could have sport fished.

As shown in Table 4 and Table 6, the estimated total sport halibut harvest by holders of SHARCs in 2009 was 9,938 fish and 165,318 lb (net weight). By area fished, most of the sport halibut harvest by SHARC holders occurred in Area 3A (Southcentral Alaska) (91,276 lb; 55%) and Area 2C (Southeast Alaska) (68,158 lb; 41%) (Table 6). In total, an estimated 2,528 SHARC holders (22%) reported that they sport fished for halibut in 2009. A large proportion of these fishers fished in either Area 2C (1,435; 57%) or Area 3A (1,023; 40%) (Table 6). (See Appendix Table E-7 for estimated sport halibut harvests by tribe and nontribal rural community SHARC holders.)¹⁵

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

Table 9 reports the average net weight of subsistence- and sport-caught halibut by SHARC holders in 2009, based upon estimates provided by survey respondents. For the state, the estimated average net weight of subsistence caught halibut was 19.0 lb and the average net weight of sport harvested halibut by SHARC holders was 16.6 lb. For the halibut reported as harvested in the SHARC program by SHARC holders in 2009, the average net weight per harvested halibut was 18.5 lb. Between regulatory areas, there was a range of average weights per halibut. The halibut harvested by the communities of Area 4D (St. Lawrence Island), averaged 24.9 lb (net weight) per fish. Halibut harvested in the subsistence fishery in Area 4C were also larger than the state average, at 23.1 lb per fish, as were the halibut harvested in the subsistence fishery in 4A, at 22.9 lb per fish. In contrast, in Area 4E, halibut harvested in the subsistence fishery averaged 10.8 lb (net weight), about one-half of the statewide average.

The average weight of halibut declined steadily over the first 6 years of this project, but rose in 2009 compared to 2008, when the average subsistence caught halibut weighed 18.2 lb, sport harvested halibut

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 et al. 2006:19–20, 123–138. In short, the primary factor (for 69% of respondents) was the gear used to harvest the fish: respondents viewed rod and reel as “sport gear” and setline gear as “subsistence gear.” Another factor, reported by 12%, concerned the composition of the fishing group. If the SHARC holders had fished with relatives or friends who did not possess a SHARC, they classified their fishing as recreational. Harvest amounts were also a consideration: harvests of one or two halibut with a rod and reel were considered “sport” by some respondents, but if they harvested more than 2 fish with rod and reel in one day, they classified the harvest as subsistence. Finally, about 19% of the respondents gave reasons related to the uses of the fish or other cultural and lifestyle explanations.

by SHARC holders weighed 17.3 lb, and all halibut harvested by SHARC holders averaged 18.1 lbs (Fall and Koster 2010:15–16). In 2007, the estimated average weight of halibut harvested in the subsistence fishery was 19.2 lb, the average halibut harvested by SHARC holders while sport fishing weighed 17.9 lb, and the average of all halibut harvested noncommercially was 19.0 lb (Fall et al. 2007; Fall and Koster 2008:18). In 2006, the estimated average weight of halibut harvested in the subsistence fishery was 20.8 lb, the average halibut harvested by SHARC holders while sport fishing weighed 19.9 lb, and the average of all halibut harvested noncommercially was 20.7 lb (Fall et al. 2007:20). In 2005, the estimated average weight of halibut harvested in the subsistence fishery was 21.1 lb, the average halibut taken by SHARC holders while sport fishing weighed 20.8 lb, and the average of all halibut harvested noncommercially was 21.0 lb (Fall et al. 2006:20). In 2004, the statewide average for subsistence harvested halibut was estimated at 22.8 lb, the average sport harvested halibut by SHARC holders was 20.0 lb, and the average for all halibut harvested noncommercially was 22.2 lb (Fall et al. 2005:17). In 2003, the statewide average for subsistence harvested halibut was 23.7 lb, the average sport harvested halibut by SHARC holders was 22.8 lb, and the average for all halibut harvested noncommercially was 23.5 lb (Fall et al. 2004:14).

ROCKFISH HARVESTS

Survey respondents were asked to estimate the number of rockfish they harvested while subsistence fishing for halibut in 2009. Harvest data at the species level were not collected as part of this survey.

Note that these survey results do not represent an estimate for the total subsistence rockfish harvest by SHARC holders in 2009 because they might have harvested rockfish while fishing for species other than halibut, and other fishers in the communities who did not obtain SHARCs might have harvested rockfish. The Division of Subsistence Community Subsistence Information System (CSIS)¹⁶ includes estimates of rockfish harvests for communities in which comprehensive household surveys have been administered.

It should also be noted that the label “bycatch” for these harvests is misleading.¹⁷ Rockfish are used for subsistence purposes in rural communities throughout their range in Alaska (CSIS). It is highly likely that most rockfish harvested incidentally in the subsistence halibut fishery are utilized as a subsistence food. It is highly unlikely that many incidentally caught rockfish are discarded in this subsistence fishery.

As shown in Table 10, the statewide estimated rockfish incidental harvest in the subsistence halibut fishery in 2009 was 13,315 fish by 1,427 fishers (12% of all SHARC holders, and 27% of all SHARC holders who subsistence fished for halibut in 2009). This is an average of about 2.5 rockfish per fisher for all subsistence halibut fishers in the SHARC program, and about 9.3 rockfish per fisher for those who had a rockfish harvest. Most of the subsistence halibut fishers who caught rockfish fished in Area 2C (Southeast Alaska) (1,084 fishers; 76%) and Area 3A (328 fishers; 23%). In Area 2C, about 34% of subsistence halibut fishers incidentally harvested rockfish, as did 19% in Area 3A (Southcentral Alaska). (See Appendix Table E-7 for estimated rockfish harvests by tribe and by nontribal rural community SHARC holders.)

As illustrated in Figure 28 and Figure 29, most of the incidental rockfish harvest in 2009 was harvested in Area 2C: 8,958 rockfish, 67% of the statewide total. Area 3A accounted for the second highest total: 3,242 rockfish, 24% of the total. Harvests were very small by SHARC holders fishing in other regulatory areas; their combined harvest of 1,115 rockfish was about 8% of the statewide total. Compared to 2008,

¹⁶ <http://www.subsistence.adfg.state.ak.us/CSIS>. Hereinafter cited as CSIS; see footnote 6.

¹⁷ The Magnuson-Stevens Fishery Conservation and Management Act (Section 3) defines “bycatch” as “fish harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program.” Federal regulations (50 CFR 679.2) define “bycatch” or “bycatch species” as fish caught and released while targeting another species or caught and released while targeting the same species; under 50 CFR 600.10 “discard” means to release or return fish to the sea, whether or not such fish are brought fully on board a fishing vessel. In all cases, “bycatch” means to discard fish and excludes retaining fish for use. The federal definition of “incidental catch” or “incidental species” is “fish caught and retained while targeting on some other species, but does not include discard of fish that were returned to the sea” (50 CFR 679.2).

when 14,346 rockfish were harvested, the incidental rockfish harvest in the subsistence halibut fishery in 2009 was down by 7%. The 2009 estimated rockfish harvest was also lower than the estimate for 2004 (19,001 rockfish), 2006 (16,945), 2007 (15,266), and 2003, (14,870 rockfish), but higher than 2005, when the incidental rockfish harvest was 12,395.

Table 10 also reports location of incidental rockfish harvests in 2009 within geographic subareas. Most of the harvest occurred in southern Southeast Alaska (4,691 fish), the Sitka LAMP area (3,156 rockfish), the Kodiak Island road system (1,173 rockfish), the remainder of northern Southeast Alaska (1,111 rockfish), other Kodiak Island locations (892 rockfish), the lower Alaska Peninsula area (770), Cook Inlet (614 rockfish), and Prince William Sound (405 rockfish). Incidental rockfish harvests totaled 159 fish in the Yakutat subarea, 148 in eastern Aleutians subarea, and 118 in the Chignik subarea.

LINGCOD HARVESTS

Survey respondents were asked to estimate the number of lingcod they harvested while subsistence fishing for halibut in 2009. Note that these survey results do not provide an estimate of the total subsistence lingcod harvest by SHARC holders in 2009 because they might have harvested lingcod while fishing for species other than halibut. Also, other fishers in the communities who did not hold SHARCs might have fished for or harvested lingcod, so that these incidental harvests represent only a portion of the total 2007 subsistence harvest. The Division of Subsistence Community Subsistence Information System (CSIS) includes estimates of lingcod harvests for communities in which comprehensive household surveys have been administered.

It should also be noted that the label “bycatch” for these harvests might be misleading.¹⁸ Lingcod are used for subsistence purposes throughout their range (CSIS). It is highly likely that most lingcod harvested incidentally in the subsistence halibut fishery are utilized as a subsistence food. It is very unlikely that many lingcod caught in this subsistence fishery are discarded.

The statewide estimated incidental lingcod harvest in the subsistence halibut fishery in 2009 was 3,390 fish by 900 fishers (Table 10). This is an average of about 0.6 lingcod per fisher for all subsistence halibut fishers who participated in the SHARC program, and 3.8 lingcod per fisher for those who had a lingcod harvest. Of SHARC holders who subsistence fished for halibut in 2009, 17% harvested at least one lingcod while halibut fishing. Almost all of the subsistence halibut fishers who harvested lingcod fished in Area 2C (Southeast Alaska) (642; 71%) and Area 3A (Southcentral Alaska) (240; 27%). (See Appendix Table E-7 for estimated lingcod harvests by tribe and by nontribal rural community SHARC holders.)

As illustrated in Figure 30 and Figure 31, most of the incidental lingcod were harvested in Area 2C: 2,036 lingcod, 60%. Area 3A fishing locations accounted for the second highest total: 972 lingcod, 29%. In 2003–2008, an estimated 3,298, 4,407, 2,355, 3,486, 3,402, and 3,479 lingcod, respectively, were harvested in the subsistence halibut fishery. The 2009 estimated harvest represents a decrease of 3% in the incidental lingcod harvest compared to 2008, and a decrease of 0.6% over the previous 6-year average (2003–2008).

Table 10 also reports the location of incidental lingcod harvests by geographic subarea in 2009. Most of this harvest occurred in Area 2C (Southeast Alaska): the Sitka LAMP area (1,037 lingcod), southern Southeast Alaska (779 lingcod), and northern Southeast Alaska waters outside the Sitka LAMP (220 lingcod). Incidental lingcod harvests totaled 380 lingcod along the Kodiak Island road system, 303 lingcod in the lower Alaska Peninsula, 221 lingcod in other Kodiak area waters, 149 in Cook Inlet, and 136 in the Yakutat area. Harvests totaled fewer than 100 lingcod in each of the other geographic subareas.

¹⁸ See footnote 17 for definitions of “bycatch” and “incidental catch.”

CHAPTER 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 in previous years continues to be 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 been in place for only 7 years, since May 2003.

Although the ADF&G Division of Subsistence has conducted systematic household surveys in many rural Alaska communities that have traditional uses of halibut, these studies pertain to different harvest years. In addition, there are many communities, especially in western Alaska, where such surveys have not been conducted. Also, these Division of Subsistence studies have attempted to estimate the total halibut harvest for home use by including harvests conducted under sport fishing rules and harvests removed from commercial fisheries for home use. Typically, these studies have also collected harvests by gear type, such as rod and reel or “other gear.” When using these data sets, therefore, it is not possible to separate the “sport” harvest from the “subsistence” harvest for past harvest years, especially in larger rural communities with a diverse population where at least a segment of the population perceives some of their halibut fishing effort as recreational (see, for example, the discussions about Sitka and Kodiak, below).

Furthermore, the statewide subsistence halibut harvest estimates from the SHARC postal survey include only those subsistence harvests by individuals who obtained SHARCs. The estimates do not include total noncommercial harvests, such as those accomplished under sport fishing regulations, or halibut removed by commercial fishers for use by their households or for noncommercial sharing.¹⁹ Thus they can be only partial estimates of the total harvest of halibut for home use by rural Alaska residents and cannot be directly compared to estimates from previous Division of Subsistence studies.

The report for the first year of this project included a detailed discussion of previous efforts to develop an estimate of subsistence halibut harvests at the regional and statewide levels. The report suggested that the 2003 SHARC survey estimates were not markedly different from estimates based on Division of Subsistence household survey data as reported in the Community Subsistence Information System (CSIS). We will not repeat that full discussion here.²⁰ 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 is developed based upon the SHARC survey results, discussion of harvest trends in the subsistence halibut fishery will remain speculative. A discussion comparing the project findings for 2009 with those for 2003–2008 appears in Chapter 4.

¹⁹ Since 1995, halibut removed for personal use by commercial fishers from their commercial harvests must be weighed and accounted for within the commercial quota share program (Gregg Williams, IPHC, personal communication).

²⁰ For example for 2000, the IPHC estimated 439,000 pounds net weight for Alaska “personal use” (noncommercial, nonrecreational) harvests (*in* 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 pounds net weight. See Fall et al. 2004:19–21 for discussion of Wolfe’s methods. In the original analysis for the subsistence halibut program, the NPFMC estimated the Alaska subsistence halibut harvest at 1.5 million pounds net weight (68 FR 18145, April 15, 2003, EA/RIR [NPFMC 2003]).

COMMUNITY CASE STUDIES

Despite the limitations discussed above, it is possible to compare some communities' previous noncommercial halibut harvest estimates with estimates generated from the SHARC survey, keeping in mind the different sampling methods, uncertainty in the separation of subsistence and recreational harvests, and the relative newness of the regulatory changes enacted in 2003. Prior Division of Subsistence research has suggested that such communities, presented here as case studies, can also be seen as representative of other communities of similar size and geographic location. In the following evaluation, emphasis is placed on larger communities, since, as discussed in Chapter 2, a small number of large communities have accounted for most of the statewide subsistence halibut harvest, according to the SHARC surveys. A comparison of the harvest estimates for these communities helps to determine the reliability of the statewide estimate generated by the SHARC survey, as well as survey performance. Because, as noted in Chapter 1, not all tribal SHARC holders live in the community where their tribal headquarters is located, the following comparisons are based upon place of residence of the SHARC holder, in order to be consistent with earlier division studies. Table 11 reports selected project findings for 2003–2009 in the case study communities discussed below. Appendix tables E-4, E-5, and E-6 report project results for 2008 for all communities, based upon residence of SHARC holders.

Sitka (Regulatory Area 2C)

Sitka had a population of 8,835 people in 2000, 2,178 of whom were Alaska Native (U.S. Census Bureau 2001). In 2009, the estimated population of Sitka was 8,627 (Table 1; ADLWD 2010). Sitka was the second largest rural community eligible to participate in the SHARC halibut fishery in 2009, and had the second highest number of SHARCs issued, at 1,731 (Table 11) (about 15% of the Alaska total). Of these, 1,446 were issued to nontribal residents of Sitka, and 285 to tribal members; the latter total was down from 470 in 2007 (Fall and Koster 2008:22). Members of the Sitka Tribe of Alaska (STA) held 288 SHARCs in 2009, compared to 485 in 2007 and 273 in 2008. It is important to remember that some STA members live in communities other than Sitka and that members of other Alaska tribes live in Sitka. Because of the relatively large number of SHARC holders who live there, developing a reliable subsistence halibut harvest estimate for Sitka is essential for the success of this subsistence harvest assessment program. Sitka residents' response rates to the survey have also been substantial during the 7 years of the project: 75% in 2003, 72% in 2004, 68% in 2005, 69% in 2006, 68% in 2007, 71% in 2008, and 67% in 2009.

The Division of Subsistence has generated 2 estimates of noncommercial halibut harvests in Sitka for years prior to the 2003 authorization of subsistence halibut fishing (Table 12). One is for the 1987 study year, in which the estimated total noncommercial halibut harvest was 193,335 lb (net weight) ($\pm 22\%$), or 180,982 lb if fish removed from commercial harvests are excluded. This noncommercial total includes only harvests reported by surveyed persons as taken with rod and reel; data on harvests using "other methods" such as longlines, which were not allowed at that time in the subsistence fishery, were not collected. An estimated 1,252 Sitka households had at least one member who fished noncommercially for halibut in 1987. For 1996, the total estimated noncommercial harvest was 165,772 lb (net weight) ($\pm 28\%$), and 149,244 lb with commercial removals excluded. In 1996, an estimated 943 Sitka households had at least one member who fished noncommercially for halibut.

For 2009, the estimated subsistence harvest of halibut, by both tribal SHARC holders who live in Sitka (most, but not all, of whom are members of the STA) and by other residents of Sitka (1,731 SHARC holders), was 97,424 lb (net weight) (4,834 fish). This was the second highest of any community (behind Kodiak), and accounted for 11% of the statewide total subsistence halibut harvest. Of Sitka's total subsistence halibut harvest, 86,219 lb (88%) was taken with setline gear, and 11,205 lb (12%) was taken with hand-operated gear. Adding sport harvests by Sitka SHARC holders (10,516 lb) produces a noncommercial estimate of 107,940 lb (net weight). Of all SHARC holders from Sitka, an estimated 844 subsistence fished for halibut in 2009. Of these, 774 used setline gear and 265 used hand-operated gear.

Also, an estimated 265 SHARC holders from Sitka sport fished for halibut in 2009. Thus the estimated total number of SHARC holders living in Sitka who fished for halibut in either the subsistence or recreational fishery in 2009 was 941 (Table 11).

Estimated subsistence and sport halibut harvests by Sitka SHARC holders in 2009 were lower than estimates for any of the previous 6 study years (Table 11). A total of 1,639 Sitka residents had SHARCs in 2003; 1,871 in 2004; 1,974 in 2005; 1,895 in 2006; 1,954 in 2007; and 1,662 in 2008, compared to 1,731 in 2009. Subsistence harvests by all Sitka SHARC holders were 174,880 lb (net weight) in 2003 compared to 166,474 lb in 2004, 146,319 lb in 2005, 163,372 lb in 2006, 142,049 lb in 2007, 109,581 lb in 2008, and 97,424 lb in 2009; the 2009 estimate was 11% lower than the estimate for 2008. A decline also occurred in the number of halibut harvested: 6,621 in 2003, 6,583 in 2004, 6,062 in 2005, 6,691 in 2006, 6,304 in 2007, 5,513 in 2008, and 4,834 in 2009. Adding sport harvests of halibut by SHARC holders to subsistence harvest totals results in noncommercial harvest estimates for Sitka that are similar among the first 4 years of the project: 207,288 lb for 2003, 192,303 lb in 2004, 202,232 lb for 2005, and 186,404 lb in 2006, but the total noncommercial harvest declined to 107,940 lb in 2009. According to the SHARC survey, about the same number of Sitka residents participated in the subsistence halibut fishery in 2009 (844) as in 2008 (845), and more compared to 2003 (821 SHARC holders) or 2005 (814 SHARC holders), but less than in 2004 (904 SHARC holders), 2006 (915), or 2007 (921). Of those SHARC holders who participated in either the subsistence or sport fisheries for halibut in 2009, there were 941, similar to 932 in 2008, but lower than 956 in 2003, 1,026 in 2004, 987 in 2005, 1,036 in 2006, and 1,010 in 2007.²¹

In summary, this comparison suggests that the 2003–2009 subsistence halibut harvest estimates for Sitka, based on the SHARC survey, appear reasonable. The estimates for 2003–2007 were generally the same as those generated from previous face-to-face household surveys conducted in 1987 and 1996. However, the SHARC survey data for 2008 and 2009 suggest a decline in halibut harvests in Sitka compared to previous project years. A decline in the number of SHARCs held by tribal members in Sitka may account, at least in part, for lower 2008 and 2009 estimated harvests, although average harvests by nontribal SHARC holders in Sitka were also lower in 2008 and 2009 compared to 2003–2007 (Table 13). For example, nontribal SHARC holders from Sitka who fished for halibut in 2009 had an average harvest of 115 pounds per fisher, the lowest of the 7 project years and 28% below the previous 6-year average of 159 pounds per fisher. Tribal SHARC holders from Sitka who fished in 2009 also had much lower harvests than previous years: only 120 pounds per fisher, which is 51% below the previous 6 year average of 243 lb. These findings suggest that the low 2009 harvest estimate was not simply a result of inadequate sampling or less participation in the SHARC program, but that subsistence harvests in Sitka appear to have declined from 2003 through 2009 and that the causes of this decline will require further investigation.

Petersburg (Regulatory Area 2C)

In 2000, Petersburg had a population of 3,224, including 388 Alaska Natives (U.S. Census Bureau 2001). In 2009, the estimated population had dropped to 2,973 (Table 1; ADLWD 2010). Prior to the 2003 authorization of federal subsistence halibut fishing, the Division of Subsistence generated 2 estimates of noncommercial halibut harvests by Petersburg residents, based on household surveys in 1987 and 2000 (Table 14). In the 1987 project, a random sample of 49 of the 1,123 households in Petersburg was interviewed (4%), which generated a subsistence harvest estimate of 119,176 lb of halibut (net weight) ($\pm 51\%$); of this, 11,728 lb were estimated to have been removed from commercial harvests, resulting in a total noncommercial harvest estimate of 107,448 lb. As with Sitka, the 1987 project in Petersburg

²¹ Following a recommendation from the first project year (Fall et al. 2004:31), data from the ADF&G Division of Sport Fish *Statewide Harvest Survey* (SWHS) about sport halibut harvests by Sitka residents were analyzed for additional background on halibut fishing in the community and discussed in the report for the 2004 project year (Fall et al. 2005:23-24). An updated analysis has not been prepared for this report.

collected noncommercial harvest data only for halibut taken with rod and reel. Of the 1,123 households in Petersburg, 54% were estimated to have at least one member who fished for halibut noncommercially in 1987, which was an estimated 604 halibut fishers (CPDB). In 2000, Petersburg residents were estimated to have harvested 55,974 lb (net weight) of noncommercial halibut ($\pm 39\%$). Of this, 6,951 lb were estimated to have been removed from commercial harvests, for a subsistence harvest of 49,023 lb, all of which was taken with rod and reel. In 2000, it was estimated that 468 Petersburg households had at least one member who fished for halibut for home use.

For 2009, the estimated subsistence harvest of halibut by Petersburg residents with SHARCs (1,041 SHARC holders) was 46,766 lb (net weight), very similar to the 46,600 lb harvested by 985 SHARC holders in 2008 (Table 11). In 2007, 1,123 SHARC holders in Petersburg harvested 47,517 lb of halibut in the subsistence fishery; in 2006, 1,082 SHARC holders harvested 53,682 lb; in 2005, 1,197 SHARC holders harvested 61,372 lb; in 2004, 1,187 SHARC holders harvested 71,784 lb; and in 2003, 1,047 SHARC holders harvested 55,718 lb. Of the total 2009 subsistence halibut harvest, 30,105 lb (64%) was harvested with setline gear and 16,661 lb (36%) with hand-operated gear, again similar to 2008, when 31,077 lb (67%) was harvested with setline gear and 15,523 lb (33%) with hand-operated gear. In 2007, 67% of the subsistence halibut harvest by Petersburg residents was taken with setline gear, and 33% with hand-operated gear; 66% with setline gear and 34% with hand-operated gear in 2006; 72% with setline gear and 28% with hand-operated gear in 2005; and about 75% taken with setline gear and 25% with hand-operated gear in both 2003 and 2004.

In 2009, Petersburg SHARC holders also harvested 13,619 lb of halibut they classified as sport harvested, compared to 17,506 lb in 2008. This gives a total noncommercial halibut harvest estimate for Petersburg SHARC holders of 60,385 lb in 2009, compared to 64,108 lb in 2008, and the lowest total over the 7 years of the project. In 2007, the sport harvest contributed 15,177 lb to the total noncommercial halibut harvest of 62,694 lb; 17,351 lb in 2006, for a total noncommercial halibut harvest estimate of 71,033 lb; 23,289 lb in 2005 for a total noncommercial harvest estimate of 84,661 lb; 26,408 lb in 2004 for a total noncommercial harvest estimate of 98,192 lb; and 19,611 lb in 2003 for a total noncommercial halibut harvest estimate of 75,329 lb (Table 11).

In 2009, an estimated 418 Petersburg SHARC holders harvested halibut in the subsistence fishery (323 with setline gear and 224 with hand-operated gear). This compares to 393 fishers in 2008 (285 with setline gear and 207 with hand-operated gear); 386 fishers in 2007 (274 setline and 191 hand-operated gear); 416 fishers in 2006 (300 setline and 222 hand-operated gear); 436 fishers in 2005 (338 setline gear and 175 used hand-operated gear); 482 fishers in 2004 (322 setline gear and 206 hand-operated gear); and 415 subsistence halibut fishers in 2003 (330 setline gear and 138 hand-operated gear). In 2007, an estimated 264 Petersburg SHARC holders sport fished for halibut, as did 246 in 2006, 312 in 2005, 351 in 2004, and 268 in 2003. An estimated total of 516 Petersburg SHARC holders either subsistence or sport fished for halibut in 2007 and 529 in 2006, 569 in 2005, 617 in 2004, and 523 in 2003 (Table 11).

Because some Petersburg residents without SHARCs likely sport fished for and harvested halibut, the 2003–2009 estimates of noncommercial halibut harvests by Petersburg residents generated by the SHARC survey appear consistent with the 1987 estimate based on household interviews, although the SHARC estimate is slightly higher than the in-person estimate for 2000, the year that state regulations restricted subsistence fishing to handlines or rods and reels with no more than 2 hooks. In that year, no Petersburg households reported taking halibut for home use with any gear other than rod and reel. In contrast, an estimated 330 used setline gear in 2003, based on the SHARC survey, and 322 in 2004, 338 in 2005, 300 in 2006, 274 in 2007, 285 in 2008, and 323 in 2009 (Table 11, Table 13).

Cordova (Regulatory Area 3A)

In 2000, Cordova had a population of 2,454 people, including 368 Alaska Natives (U.S. Census Bureau 2001). Cordova's estimated population in 2009 was 2,126 (Table 1; ADLWD 2010). Before 2003, there were 6 Division of Subsistence household surveys that estimated noncommercial halibut harvests (Table

15). After subtracting fish removed from commercial harvests for home use, estimated noncommercial halibut harvests by Cordova residents ranged from 25,609 lb (net weight) ($\pm 33\%$) in 1991 to 120,221 lb ($\pm 62\%$) in 1988, with an average over the 6 project years of 57,285 lb. The estimated number of Cordova households with at least one member fishing noncommercially for halibut ranged from 228 in 1985 to 401 in 1992, with a mean of 325 households (CSIS).

SHARC survey subsistence halibut harvest estimates and participation estimates for Cordova residents for 2003 were lower than might be expected from previous research (Fall et al. 2004:24–25). In 2003, 358 residents of Cordova obtained SHARCs (Table 11). Of these, an estimated 102 subsistence fished (68 with setline gear, 40 with hand-operated gear), 144 reported that they sport fished for halibut, and 194 fished for halibut either under the new federal subsistence halibut provisions or in the sport fishery. The estimated subsistence harvest from the SHARC survey was 15,498 lb (net weight) (7,613 lb [49%] with setline gear, 7,885 lb [51%] with hand-operated gear), and there were an additional 11,534 lb estimated taken by SHARC holders while sport fishing. The total of 27,032 lb was about 47% of the average for previous project years.

Based on these comparisons, the final report for 2003 suggested that the SHARC survey had underestimated the amount of halibut harvested by Cordova residents for home use, perhaps because not all subsistence fishers in Cordova obtained SHARCs in 2003. The results of the survey for 2004 also supported this conclusion (Fall et al. 2005:25–26). A total of 526 Cordova residents had obtained SHARCs by the end of 2004 (an increase of 47%) (Table 11). An estimated 262 Cordova SHARC holders subsistence fished for halibut in 2004, up 157% from 2003. Of these, 174 fished with setline gear (up 156%) and 97 used hand-operated gear. The estimated subsistence halibut harvest by Cordova residents in 2004 was 40,640 lb (net weight), an increase of 163% over 2003. Sport harvests by Cordova SHARC holders (an estimated 174 of whom sport fished for halibut in 2004) added 12,149 lb to the community harvest for 2004, for a total estimate of 52,789 lb of halibut harvested noncommercially by 325 fishers. This total was an increase of 95% over 2003, and was about 92% of the average for the 6 survey years prior to 2003 (and exceeded the total for 3 of those 6 years). Given that some Cordova residents likely obtained halibut for home use exclusively in the sport fishery and without obtaining SHARCs, the SHARC survey estimate for 2004 appeared consistent with earlier estimates of subsistence halibut harvests in Cordova.

Findings for Cordova for 2005 were much like those for 2004 and supported the conclusions of the 2004 final report. As shown in Table 11, 602 Cordova residents held SHARCs in 2005, continuing the growth that had occurred in 2004, but at a slower pace. Subsistence halibut harvests totaled 47,141 lb, up about 16% from 40,640 lb in 2004. In 2004, 73% of the total was harvested with setline gear, as was 74% in 2005. In 2005, 281 Cordova residents obtained SHARC cards and went subsistence fishing, compared to 262 in 2004. Cordova SHARC holders harvested 10,519 lb of halibut while sport fishing in 2005, for a total noncommercial harvest estimate of 57,660 lb. This total was similar to the estimate for 2004 (a combined total of 52,789 lb in the subsistence and sport fishery) and approximated the mean harvest of 57,285 lb estimated in the 6 harvest survey project years.

The estimated subsistence halibut harvest for Cordova in 2006 was 29,027 lb, a decline from 2004 (40,640 lb) and 2005 (47,141 lb) but still about double the 2003 estimated harvest (15,498 lb) (Table 11). The reasons for this decline remain uncertain. The estimated sport halibut harvest by Cordova SHARC holders in 2006 was 7,020 lb, lower than estimates in the first 3 years of the SHARC program. In total, Cordova SHARC holders harvested an estimated 36,047 lb of noncommercial halibut in 2006. This total was substantially lower than the noncommercial estimates for 2004 (52,789 lb) and 2005 (57,660 lb), but was higher than that for 2003 (27,032 lb) (Table 11). The 2006 estimate was higher than estimates generated during previous in-person survey efforts in 1985 and 1991, but lower than the average for the 6 years for which SHARC data are available (Table 14).

Estimated subsistence halibut harvests by Cordova SHARC holders declined slightly in 2007 from 2006 levels, to 28,716 lb, with most of this (21,683 lb; 76%) taken with setline gear. Sport harvests of halibut by Cordova SHARC holders declined to 4,203 lb in 2007, the lowest of the 5 previous project years. The total noncommercial harvest estimate for 2007 by Cordova SHARC holders was 32,919 lb of halibut, lower than any project year except 2003 and also lower than the average for the previous 6 in-person surveys (Table 11, Table 14).

For 2008, the estimated subsistence harvest of halibut in Cordova was 27,547 lb, lower than any SHARC project year since 2003 but similar to estimates for 2006 and 2007 (Table 11). Of the 2008 subsistence harvest, 81% (22,301 lb) was harvested with setline gear. Sport harvests of halibut by Cordova SHARC holders totaled 5,562 in 2008, lower than during any SHARC project year except 2007. The 2008 total noncommercial harvest of halibut by Cordova SHARC holders was 33,109 lb of halibut, which was the second lowest (after 2007) since 2003. The 2008 estimated harvest was only 58% of the annual average for pre-2003 project years, although it is higher than either 1985 or 1991 (Table 14).

The estimated subsistence halibut harvest for Cordova for 2009 was 23,364 lb, the lowest since 2003 and continuing a declining trend that began in 2005 (Table 11). Of the 2009 subsistence harvest, 76% (17,766 lb) was harvested with setline gear and the remaining 24% (5,598 lb) with hand-operated gear. Sport harvests of halibut by Cordova SHARC holders in 2009 added 3,868 lb, the lowest total over the 7 years of the project. The 2009 total noncommercial harvest of halibut by Cordova SHARC holders was 27,232 lb, the lowest since 2003. The 2009 estimated harvest was 47% of the annual average for pre-2003 project years, and higher than only 1991 (Table 14).

More Cordova residents held SHARCs in 2009 (599) than in 2008 (587) but fewer than in 2007 (615), 2006 (607), and 2005 (602). Fewer Cordova residents reported that they participated in the subsistence halibut fishery in 2009 (234) than in any of the previous study years. The estimated number of Cordova SHARC holders who sport fished for halibut (118) was also lower than any year from 2003–2008. In 2009, 269 Cordova SHARC holders fished noncommercially for halibut, down from 292 in 2008 and 315 in 2007. In 2009, fewer Cordova SHARC holders participated in any noncommercial halibut fishing than in any year since the new regulations came into effect except 2003 (Table 11).

Port Graham (Regulatory Area 3A)

Port Graham, which is located in Lower Cook Inlet, had a population of 171 in 2000, including 151 Alaska Natives (U.S. Census Bureau 2001). Port Graham's population in 2009 was estimated at 137 (Table 1; ADLWD 2010). It is presented as a case example of the smaller, predominantly Alaska Native communities in regulatory areas 3A and 3B that depend heavily on subsistence harvests of fish and wildlife resources. The division has produced estimates of subsistence halibut harvests by Port Graham residents based on household surveys for 7 project years (Table 16). Excluding 1989, the year of the *Exxon Valdez* oil spill, Port Graham's noncommercial halibut harvests ranged from 4,451 lb (net weight) ($\pm 14\%$) in 1993 to 11,232 lb ($\pm 14\%$) in 1992, with a 6-year average of 7,591 lb (net weight) (Figure 32). Again excluding 1989, an estimated average of 38 Port Graham households had at least one member who subsistence fished for halibut in the project years in the late 1980s and 1990s.

In 2009, a total of 47 Port Graham residents held SHARCs (excluding Port Graham tribal members who do not live in Port Graham), similar to the total of 48 SHARC holders in 2008. In 2009, an estimated 35 Port Graham residents participated in the subsistence halibut fishery, with 22 using setline gear and 31 hand-operated gear; 9 said they went sport fishing for halibut. In comparison, in 2008, an estimated 30 Port Graham residents subsistence fished for halibut, with 13 using setline gear and 23 using hand-operated gear. Also, 2 said they had sport fished for halibut in 2008. In 2007, of 59 SHARC holders in Port Graham, an estimated 36 subsistence fished for halibut, with 22 using setline gear and 28 using hand-operated gear. Also, 4 said they sport fished for halibut in 2007. In 2006, 30 Port Graham SHARC holders subsistence fished for halibut, with 9 using setline gear and 24 using hand-operated gear. In 2005, 18 Port Graham SHARC holders subsistence fished for halibut, with 8 using setline gear and 18 using

hand-operated gear. Nine Port Graham SHARC holders sport fished for halibut in 2005. In 2004, 42 Port Graham SHARC holders subsistence fished for halibut, with 15 using setline gear and 31 using hand-operated gear; 11 said they sport fished for halibut. In 2003, 35 Port Graham SHARC holders subsistence fished for halibut (10 used setline gear, 28 used hand-operated gear), and 3 said they sport fished for halibut (Table 11). The findings for the 2003–2009 SHARC surveys were thus consistent with levels of participation found in the noncommercial halibut fisheries during previous studies in Port Graham, although estimated participation was lower in 2005, according to the SHARC survey.

The subsistence halibut harvest estimate for Port Graham in 2009 was 6,426 lb (Table 11). Of this, 1,454 lb (23%) were harvested with setline gear and 4,973 lb (77%) with hand-operated gear. Adding 197 lb that Port Graham SHARC holders harvested in the sport halibut fishery results in a total community noncommercial harvest estimate of 6,623 lb in 2009. Harvests in 2009 were down compared to 2008, when Port Graham SHARC holders harvested an estimated 9,097 lb of halibut in the subsistence fishery, with 6,896 lb taken with setline gear and 2,200 lb with hand-operated gear, and an additional 51 lb in the sport fishery. Harvests in 2009 were also lower than those of 2007—8,493 lb in the subsistence fishery (5,347 lb by setline, 3,146 with hand-operated gear) and 233 lb in the sport fishery. Harvests in 2009 were similar to those of 2006, when Port Graham SHARC holders harvested an estimated 6,194 lb of halibut, with 2,397 lb taken with setline gear and 3,797 lb with hand-operated gear. (No sport harvests were reported for 2006). In the first 3 years of the SHARC program (2003–2005), estimated subsistence halibut harvests were higher in Port Graham than in 2006–2009. In 2005, Port Graham SHARC holders harvested an estimated 11,127 lb of halibut, with 7,938 lb taken with setline gear and 3,190 lb with hand-operated gear. In 2004, Port Graham’s estimated subsistence halibut harvest was 9,181 lb (net weight) with 4,425 lb (48%) harvested with setline gear and 4,755 lb (52%) with hand-operated gear. In 2003, the estimated halibut harvest was 11,454 lb (net weight), with 4,398 lb (38%) harvested with setline gear and 7,056 lb (62%) with hand-operated gear. Only 2 Port Graham SHARC holders reported sport fishing effort for halibut in 2007, with no harvest. (Table 11).

Total noncommercial halibut harvest estimates for Port Graham (subsistence plus sport harvests reported by SHARC holders) for 2003–2005 were similar to the highest estimate generated prior to the SHARC survey (11,232 lb in 1992) (Table 11), and they also exceeded the average of previous project years of 7,591 lb. This finding was not unexpected: Port Graham has traditionally used setlines with multiple hooks to harvest halibut as well as hand-operated gear (Stanek 1985:67–69,151). With May 2003 regulations finally consistent with traditional harvest methods, residents of Port Graham and other communities with similar traditions could fish with setline gear and hand-operated gear, and thus their reported subsistence halibut harvests are probably similar to historical levels.²² However, the 2006 estimate of 6,194 lb and the 2009 estimate of 6,623 lb were lower than those for 2003–2005, and lower than the average of the prior in-person survey estimates for 1987–1997. The 2007 and 2008 estimates were also lower than 2003–2005, but above the average of the earlier survey years (Table 15). The reasons for the lower harvests in 2006–2009 are uncertain, but a decline in the community’s population may be part of the explanation.

Kodiak City and Road System (Regulatory Area 3A)

“Kodiak” in this report includes the city of Kodiak (population 6,334 in 2000, including 829 Alaska Natives) and those portions of the Kodiak Island Borough connected to the city of Kodiak by road. This area had a population of 12,973 people in 2000, including 1,697 Alaska Natives (U.S. Census Bureau 2001). The estimated population in 2009 was 13,129 (Table 1; ADLWD 2010). This is the largest rural community eligible to participate in the Alaska subsistence halibut fishery.

²² A cautionary note for Port Graham for 2005 concerns response rate. Only 16 of 52 SHARC holders responded to the 2005 survey (31%) (Fall et al. 2006:52). Further outreach in this community was necessary to improve the response rate and build confidence in the harvest estimates. This outreach occurred in 2007 for the 2006 project year, and a response rate of 66% was achieved.

Based on Division of Subsistence household surveys, estimates of halibut harvests for home use are available in the CSIS for the entire Kodiak road system population for 1982 and 1991. Estimates for Kodiak city residents alone are available for 1992 and 1993, and these can be expanded to produce a total for the entire road system population (Table 17). Excluding fish removed from commercial catches for home use, noncommercial halibut harvests by Kodiak road system residents ranged from 247,283 lb (usable weight) ($\pm 30\%$) in 1991 to 511,254 lb ($\pm 33\%$) in 1993. The average for the 4 available project years was 366,682 lb; of this, 338,476 lb (92%) was taken with rod and reel, most likely consistent with sport fishing regulations. On average for the 4 project years, 1,306 Kodiak road system households had at least one member who fished for halibut for home use.

Kodiak residents held 1,826 SHARCs during 2009, up slightly from 1,725 in 2008 (Table 11). In 2009, an estimated 923 Kodiak SHARC holders subsistence fished for halibut; most (749; 81%) used setline gear. This compares to an estimated 963 subsistence fishers in Kodiak in 2008, of whom 763 (79%) used setline gear; 945 in 2007, of whom 707 (75%) used setline gear; 961 in 2006, of whom 684 (71%) used setline gear; 871 in 2005, 650 of whom (75%) used setline gear; 802 in 2004, 554 (69%) of whom used setline gear; and 646 in 2003, 438 of whom (68%) used setline gear. In 2009, an estimated 619 Kodiak SHARC holders sport fished for halibut, and 1,139 fished for halibut under noncommercial rules. This compares to 2008, when 693 Kodiak SHARC holders sport fished for halibut and 1,213 were involved in noncommercial halibut fishing; 2007, when 648 sport fished for halibut and 1,157 were involved in noncommercial halibut fishing; 2006, when 562 sport fished for halibut and 1,092 were involved in noncommercial halibut fishing; 2005 when 669 sport fished for halibut and 1,116 were involved in any noncommercial halibut fishing; 2004, when 581 sport fished for halibut, and 971 fished for halibut under either subsistence or sport regulations; and 2003, when 498 sport fished for halibut, and 858 either subsistence or sport fished for halibut (Table 11). Given the likelihood that many Kodiak residents continued to fish for halibut under sport fishing regulations in 2003–2009 without obtaining SHARCs, the estimated level of participation in the subsistence fishery based on the SHARC survey appears reasonable when compared to the earlier household survey results.

The estimated subsistence harvest of halibut in 2009 for Kodiak road system area residents was 177,769 lb (net weight), very similar to the 2008 estimate of 177,334 lb, but lower than the 193,633 lb estimated for 2007, 205,822 lb estimated for 2006, 210,828 lb estimated for 2005, and 187,214 lb for 2004, and higher than the 153,254 lb estimated for 2003 (Table 11). In 2009, Kodiak subsistence fishers harvested an estimated 130,802 lb of halibut with setline gear (74%) and 46,966 lb (26%) with hand-operated gear. This compares to 128,226 lb (72%) harvested with setline gear and 49,108 lb (28%) with hand-operated gear in 2008; 135,351 lb (70%) harvested with setline gear and 58,282 lb (30%) with hand-operated gear in 2007; 142,326 lb (69%) harvested with setline gear and 63,496 lb (31%) with hand-operated gear in 2006; 146,781 lb (70%) harvested with setline gear and 64,047 lb (30%) with hand-operated gear in 2005; 131,719 lb (70%) harvested with setline gear and 55,605 lb (30%) with hand-operated gear in 2004; and 101,575 lb taken in 2003 with setline gear (66%) and 51,678 lb (34%) with hand-operated gear. In addition, Kodiak road system SHARC holders harvested an estimated 64,034 lb (net weight) of halibut in 2009 they classified as sport caught, which was below the range of harvests in other years: 72,915 lb in 2008, 68,556 lb in 2007, 64,320 lb in 2006, 82,455 lb in 2005, 73,181 lb in 2004, and 68,170 lb in 2003. In total, Kodiak SHARC holders harvested 241,803 lb of halibut in 2009, compared to 250,249 lb of halibut in 2008, 262,189 lb in 2007, 270,142 lb in 2006, 293,283 lb in 2005, 260,395 lb in 2004, and 221,424 lb (net weight) in 2003 (Table 11). Not surprisingly, the totals for all 6 years of the SHARC survey are lower than those based on household surveys for previous years (except that the 2004, 2005, 2006, 2007, and 2008 SHARC survey estimates are higher than the household survey estimate for 1991) because, as just noted, many Kodiak road system residents who fish for halibut likely do not obtain SHARCs and continue to harvest halibut under sport fishing rules. Overall, the 2003–2009 subsistence harvest estimates for Kodiak appear reasonable, but they should be further evaluated using ADF&G Division of Sport Fish *Statewide Harvest Survey* data and with additional years of subsistence harvest survey data.

Sand Point (Regulatory Area 3B)

In 2000, the population of Sand Point was 952, with an Alaska Native population of 421 (U.S. Census Bureau 2001). The population estimate for 2009 was 1,001 (Table 1; ADLWD 2010). There is one estimate of 1992 halibut harvests for home use by Sand Point residents based on Division of Subsistence household surveys prior to 2003 (Fall et al. 1993), at 13,981 lb (net weight). Of this, 6,240 lb were removed from commercial harvests, 6,934 lb were taken with subsistence methods (setline or jigging with a hand-held line) and 807 lb 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. Of this, 3,409 lb were harvested with setline gear and 1,410 lb with hand-operated gear. 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 11). These are 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, when 73 obtained SHARCs. The estimated total subsistence halibut harvest was 11,355 lb (net weight). Of this total, 4,360 lb were harvested with setline gear (38%) and 6,996 lb (61%) with hand-operated gear. 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 11). This is more than double the 2003 estimate, and similar to the total community estimate for 1992 (which included halibut removed from commercial harvests). 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.

A total of 321 Sand Point residents held SHARCs in 2005. The estimated subsistence harvest of halibut increased to 21,901 lb, with 12,201 lb (56%) taken with setline gear and 9,700 lb (44%) caught with hand-operated gear. One-hundred Sand Point residents subsistence fished for halibut in 2005. In addition, 23 sport fished for halibut, adding 1,281 lb for a total noncommercial halibut harvest estimate of 23,182 lb (Table 11). The increase in the total halibut harvest, especially the increase in setline harvests, suggests that Sand Point residents were increasingly participating in the opportunities provided by the federal subsistence halibut fishery.

In 2006, the number of Sand Point residents with SHARCs increased to 365. The estimated number of SHARC holders who subsistence fished for halibut also increased, to 133 from 100 in 2005 and 109 in 2004. The estimated number of Sand Point SHARC holders subsistence fishing with setlines also increased notably to 59 in 2006, compared to 35 in 2005 and 25 in 2004. The number fishing with hand-operated gear rose slightly to 87 in 2006, from 77 in 2005 and 74 in 2004. The estimated subsistence halibut harvest by Sand Point residents in 2006 was 20,214, similar to the estimate for 2005 of 21,901. In 2006, 37% (7,406 lb) of the subsistence halibut were harvested with setline gear and 63% (12,809 lb) with hand-operated gear. In addition, an estimated 29 Sand Point SHARC holders sport fished for halibut in 2006, with an estimated harvest of 6,300 lb, up substantially from 1,281 lb of sport harvested halibut in 2005 and 1,384 lb in 2004. As a result of the higher estimated sport harvests of halibut by Sand Point SHARC holders in 2006, the total estimated noncommercial harvest of halibut increased to 26,514 lb from 23,182 lb in 2005 and 12,739 lb in 2004 (Table 11).

Subsistence halibut fishing patterns in Sand Point in 2007 were generally similar to those of 2006. During any part of 2007, 364 Sand Point residents held SHARCs, and 138 used them to subsistence fish for halibut. Of these, 49 used setline gear and 113 used hand-operated gear. The total estimated subsistence halibut harvest in 2007 was 24,615 lb, up slightly from 2006 and the highest estimate for the 5 years of the project. The subsistence harvest was about evenly split between setline gear (13,278 lb; 54%) and hand-operated gear (11,337 lb; 46%). An estimated 16 Sand Point SHARC holders also went sport fishing for halibut and they harvested an estimated 3,034 lb. In total, the noncommercial halibut harvest at Sand Point in 2007 was 27,649 lb, with 138 people involved in this harvest (Table 11).

The results of the SHARC survey for Sand Point for 2008 found subsistence halibut fishing patterns similar to those of 2006 and 2007. During 2008, 342 Sand Point residents held SHARCs, and 130 subsistence fished for halibut. Of these, 71 used setline gear and 88 used hand-operated gear. The total estimated subsistence halibut harvest in 2008 was 25,013 lb, up slightly from 2007 and the highest estimate for the 6 years of the project. Setline gear accounted for 15,766 lb (63%) and hand-operated gear added 9,247 lb (37%). An estimated 19 Sand Point SHARC holders also went sport fishing for halibut and they harvested an estimated 2,195 lb. In total, the noncommercial halibut harvest estimate at Sand Point in 2008 was 27,208 lb, with 132 people involved in this harvest (Table 11).

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 2009, 28 Sand Point fishers used setlines, compared to 71 in 2008, and 58 used hand-operated gear, compared to 58 in 2008. The estimated subsistence halibut harvest in 2009 was 11,759 lb, approximately half the average annual harvest from 2005–2008; setline gear accounted for 3,987 lb (34%) and hand-operated gear provided 7,772 lb (66%) in 2009. An estimated 19 Sand Point SHARC holders also went sport fishing for halibut in 2009 and they harvested an estimated 2,665 lb. In total, the noncommercial halibut harvest estimate at 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 11).

Unalaska–Dutch Harbor (Regulatory Area 4A)

The city of Unalaska (which includes Dutch Harbor) had a population of 4,283 in 2000, including 397 Alaska Natives (U.S. Census Bureau 2001). The estimated population in 2009 was 3,662 (Table 1; ADLWD 2010). The Division of Subsistence conducted a household harvest survey in Unalaska–Dutch Harbor for the 1994 data year and found that the estimated total halibut harvest was 97,601 lb (net weight) (3,049 fish) ($\pm 34\%$), excluding 10,606 lb (331 fish) removed from commercial catches for home use. Of the 700 households in the community, an estimated 391 (56%) had at least one member who fished for halibut in 1994. Most of the noncommercial harvest, 88,142 lb (90%), was taken with rod and reel (CSIS).

By the close of 2003, only 92 residents of Unalaska and Dutch Harbor had obtained SHARCs (Table 11). Notably, only 14 members of the Qawalangin Tribe of Unalaska obtained SHARCs in 2003. For the community overall as well as for the tribe, this was far fewer registrants than might have been predicted from the 1994 survey results. By the end of 2004, 131 Unalaska–Dutch Harbor residents had obtained SHARCs, as had 25 Qawalangin Tribe members. In 2005, 150 community members held SHARCs, as did 31 Qawalangin Tribe members. While a notable increase over 2003, this total continued to be lower than expected. The total increased to 171 SHARC holders in 2006, including 43 Qawalangin Tribe members. During 2007, 176 Unalaska–Dutch Harbor residents held SHARCs, including 46 Qawalangin Tribe members. In 2008, 173 Unalaska–Dutch Harbor residents held SHARCs, as did 43 Qawalangin Tribe members. In 2009, 164 community residents held SHARCs, as did 37 Qawalangin Tribe members.

In 2009, an estimated 76 Unalaska–Dutch Harbor SHARC holders participated in the subsistence halibut fishery, an estimated 45 sport fished, and an estimated 98 participated in either fishery. In comparison, in 2008, an estimated 87 Unalaska–Dutch Harbor SHARC holders participated in the subsistence halibut fishery, an estimated 43 sport fished, and an estimated 101 participated in either fishery. In 2007, 83 Unalaska–Dutch Harbor SHARC holders participated in the subsistence halibut fishery, 33 sport fished, and 92 participated in either fishery. In 2006, 81 Unalaska–Dutch Harbor SHARC holders participated in the subsistence halibut fishery, 50 sport fished, and 101 participated in either fishery. In 2005, 88 SHARC holders participated in the subsistence halibut fishery and 28 sport fished; 97 participated in either fishery. In 2004, 81 SHARC holders subsistence fished for halibut and 34 sport fished; 93 participated in either fishery. In 2003, 50 Unalaska–Dutch Harbor SHARC holders subsistence fished for halibut, 33 sport fished, and 70 fished in either fishery (Table 11).

In 2009, SHARC holders in Unalaska–Dutch Harbor harvested an estimated 29,306 lb of halibut in the subsistence fishery. Of this, 19,204 lb was harvested with setlines (66%) and 10,102 lb with hand-operated gear (34%). Additionally, they harvested 1,861 lb of halibut in the sport fishery, for a total noncommercial harvest of 31,167 lb (Table 11). Halibut harvests by Unalaska SHARC holders increased substantially from the first 6 years of the project. For example, in 2008, SHARC holders in Unalaska–Dutch Harbor harvested an estimated 13,710 lb of halibut in the subsistence fishery. Of this, 7,293 lb was harvested with setlines (53%) and 6,417 lb with hand-operated gear (47%). Additionally, they harvested 2,962 lb of halibut in the sport fishery, for a total noncommercial harvest of 16,672 lb. In 2007, the estimated subsistence halibut harvest was 13,250 lb, 9,012 lb (68%) with setline gear and 4,238 lb (32%) with hand-operated gear. The estimated sport harvest was 2,287 lb, for a total noncommercial harvest of 15,537 lb. In 2006, the estimated subsistence halibut harvest was 16,331 lb, 7,526 lb (46%) with setline gear and 8,805 lb (54%) with hand-operated gear. The estimated sport harvest was 3,768 lb for a total noncommercial harvest of 20,100 lb. In 2005, the estimated subsistence harvest was 18,108 lb (net weight), with most (9,573 lb; 53%) taken with setline gear and the balance with hand-operated gear. In addition, in 2005 Unalaska–Dutch Harbor SHARC holders harvested 2,439 lb of halibut while sport fishing, for a total noncommercial halibut harvest of 20,547 lb. In 2004, the estimated subsistence harvest was 15,530 lb (net weight), with most (9,557 lb; 62%) taken with setline gear and the balance with hand-operated gear. In addition, Unalaska–Dutch Harbor SHARC holders harvested 2,165 lb of halibut while sport fishing in 2004, for a total noncommercial halibut harvest of 17,695 lb. The estimated subsistence harvest for 2003 was 10,860 lb (net weight), and there was an additional 5,519 lb of halibut harvested while sport fishing, for a total noncommercial harvest of 16,379 lb.

Although the 2009 noncommercial halibut harvest by Unalaska–Dutch Harbor SHARC holders was 43% higher than the previous 6-year average of 17,822 lb, it represents just 32% of the harvest estimate for 1994. Similarly, the 2008 total halibut harvest was 17%, the 2007 total halibut harvest was 16%, the 2006 total halibut harvest was 21%, the 2005 total halibut harvest was 21%, the 2004 total halibut harvest was 18%, and the 2003 estimate was 17% of the 1994 estimate. There are at least 5 explanations for these differences. First, actual noncommercial halibut harvests in Unalaska may have declined since 1994, although a decline of this magnitude is probably unlikely. Second, if many fishers did not obtain a SHARC, the SHARC survey may have underestimated the subsistence halibut harvest. A third explanation is that the 1994 survey may have overestimated the halibut harvest. A fourth explanation is that many halibut fishers in Unalaska may prefer to harvest halibut under sport fishing regulations and therefore do not obtain SHARCs. A fifth possibility that may account for a decline in subsistence halibut harvests is a decline in stock abundance. The IPHC has noted a decline in abundance in Area 4A since 1994 (Gregg Williams, IPHC, personal communication, 2005). A combination of all 5 factors could be responsible for the unexpectedly low subsistence halibut harvest estimated for Unalaska from the SHARC surveys in all 7 study years. Further outreach in Unalaska is clearly appropriate, as well as additional research to better understand patterns of halibut fishing in the community.

Toksook Bay (Regulatory Area 4E)

Toksook Bay had a population of 532 in 2000 and 596 in 2009 (Table 1; U.S. Census Bureau 2001; ADLWD 2010). As discussed in Chapter 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 33 in 2009. 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. In 2008 and 2009, 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. Unlike 2003–2007, returned survey data were expanded to estimate 2008 and 2009 halibut harvests in Toksook Bay.

The estimated harvest for Toksook Bay for 2003 was 24,500 lb (net weight) by 54 fishers (Table 11). Project staff consider this a reliable subsistence harvest estimate for the community. It should be noted that Toksook Bay is a member of the Coastal Villages Regional Fund (CVRF) CDQ organization²³. The majority of the 5,034 lb of U32 (under 32 inches in length) halibut retained for home use by members of this CDQ organization in 2003 was landed at Toksook Bay and Mekoryuk (Williams 2004:59–60).

For 2004, 56 Toksook Bay SHARC holders reported a harvest of 6,596 lb of halibut, with most of this (5,737 lb) harvested with hand-operated gear (Table 11). This suggests a substantial decline in subsistence halibut harvests compared to 2003. As in 2003, a majority (69% of 7,120 lb [net weight]) of the U32 halibut retained for home use by the CVRF was landed at Toksook Bay and Mekoryuk (Williams 2005), but this cannot account for the decline in subsistence harvests.

In 2005, subsistence harvests by Toksook Bay SHARC holders rebounded to 14,870 lb; adding the 98 lb of SHARC holder's sport caught halibut produces a community total of 14,968 lb (Table 11). Almost all (14,269 lb; 96%) of the subsistence harvest was taken with hand-operated gear. Sixty-one Toksook Bay residents participated in the SHARC subsistence halibut fishery in 2005.

The estimated subsistence halibut harvest by Toksook Bay SHARC holders increased substantially in 2006, to 36,481 lb, all harvested with subsistence gear and most (34,149 lb; 94%) caught with hand-operated gear (Table 11). In 2006, the estimated number of participants in the SHARC subsistence fishery also increased, to 113 SHARC holders; the previous highest estimate was 61 subsistence halibut fishers in 2005. During interviews in the community in April 2007, SHARC fishers in Toksook Bay reported that subsistence fishing had been very productive in 2006; halibut were abundant and there was a corresponding increase in subsistence fishing effort. This may account for the large increase in the estimated harvest in 2006. Also, in 2006, over 67% of the 19,710 lb of U32 halibut retained for home use in the CVRF CDQ fishery were landed at Toksook Bay and Mekoryuk (Williams 2007). Division staff conducting interviews with SHARC holders in Toksook Bay reminded respondents to exclude CDQ U32 halibut in their subsistence estimates for the SHARC survey.

²³ See footnote 8 for more information about the CDQ program.

In 2007, the estimated subsistence harvest in Toksook Bay dropped to 7,921 lb (from 36,481 lb in 2006), with most of this harvest (6,469 lb; 82%) taken with hand-operated gear. The estimated number of participants in the subsistence fishery was 112, with most of these (100; 89%) using hand-operated gear. Also in 2007, 59% of the 11,398 lb of U32 halibut retained from home use during the Coastal Villages Regional Fund CDQ fishery were landed at Toksook Bay and Mekoryuk (Williams 2008). When conducting interviews in Toksook Bay in early 2008 about 2007 subsistence halibut harvests, Division of Subsistence staff encountered several subsistence fishers who did not hold SHARCs. Therefore, the 2007 estimate based on the SHARC list likely underestimates the community's total by an unknown amount.

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, 9 Toksook Bay residents participated in the subsistence halibut fishery in 2008, compared to an average of 73 for the previous 5 years (range 44 to 112; Table 11). 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. Only 33 SHARCs were active in Toksook Bay, again suggesting that many subsistence fishers are not participating in the program. Based on returned surveys (13 of 33; 39%), the estimated subsistence halibut harvest was 1,055 lb, with 789 lb (75%) taken with hand-operated gear. This harvest was less than one-half of that of 2008 and just 6% of the annual average from 2003–2007. The estimated number of subsistence halibut fishers in Toksook Bay in 2009 was 10, compared to 112 in 2007 and an average of 79 from 2003–2007. Without renewed registrations in the SHARC program and outreach in the community, it is unlikely that the mail survey alone will provide reliable harvest estimates for the subsistence halibut fishery in Toksook Bay.

Tununak (Regulatory Area 4E)

Tununak had a population of 325 in 2000, 315 of whom were Alaska Native (U.S. Census Bureau 2001). The population for 2009 was 330 (Table 1; ADLWD 2010). 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 2003,²⁴ 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 11). 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.

The tribal government supported Division of Subsistence interviewing of subsistence halibut fishers in Tununak for the 2005 project year (Fall et al. 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. There were no sport harvests of halibut reported in Tununak in 2005.

²⁴ 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 did attempt 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.

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 in order 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.

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 for which data are available: 2,143 lb, all with hand-operated gear by an estimated 8 fishers. This is 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. 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.

Also, compared to the results of the 1986 survey, the harvest estimates for Tununak for 2004 through 2007 appear low. The reasons for this difference are uncertain. As just noted, the low response to the mailed SHARC survey plus a lack of outreach or follow-up interviews likely resulted in a large underestimation of the 2008 and 2009 harvests. Several additional years of harvest data collection plus renewed outreach and community support will be necessary to adequately document subsistence halibut harvest trends in this community.

COMPARISONS WITH NONSUBSISTENCE HARVESTS IN 2009

As reported in Table 18, the preliminary estimated total halibut removal in Alaskan waters in 2009 was 70,730,382 lb (net weight) based on data compiled by the IPHC (IPHC and Geiger 2010) and this project. In this total, the removal of 11,259 lb of U32 (under 32 inches in length) halibut for personal use by CDQ organizations in Areas 4D and 4E has been added to the subsistence harvest category. Commercial harvests accounted for 62.4% of halibut removals in Alaska in 2009 (Figure 33). Bycatch mortality of halibut in various other commercial fisheries ranked second, with 22.7% of the statewide removals. Sport harvests ranked third, with 10.1%. Wastage in the commercial halibut fishery added 3.5% to the total halibut removals. Finally, the subsistence fishery accounted for 1.2% of the total removals of halibut in Alaska waters in 2009.

Halibut harvests by fishery in 2009 at the regulatory area level did not differ substantially from the statewide pattern (Table 18, Figure 34). In all regulatory areas, commercial harvests accounted for 57% or more of the total pounds net weight of halibut removals. In Area 2C (Southeast Alaska) and Area 3A (Southcentral Alaska), sport fisheries took 30.0% and 14.9%, respectively, of the halibut harvest in 2009; however, sport fisheries were smaller than the subsistence harvests in Area 3B and Area 4. Commercial bycatch accounted for 59.8% of halibut removals in Area 4. As a percentage of the total removal, subsistence halibut harvests were largest in Area 2C at 5.4% of the total (although they were less than 18% of the sport harvest and about 9% of the commercial harvest) and in Area 3A at 1.1%.

CHAPTER 4: CONCLUSIONS AND RECOMMENDATIONS

SUMMARY AND CONCLUSIONS

New federal regulations governing subsistence halibut fishing in Alaska went into effect in May 2003. The 2009 calendar year was the seventh for which a program was implemented to estimate the subsistence harvest of halibut under these regulations. By several measures, the program is a success. Of 11,733 SHARC holders, 6,944 (59%) voluntarily provided information about their subsistence halibut fishing activities in 2009 by responding to the survey. This compares to a response rate of 63% (7,316 respondents of 11,565 SHARC holders) for the 2008 project year; 58% (8,682 respondents of 15,047 SHARC holders) for the 2007 project year; 59% (8,426 respondents of 14,206 SHARC holders) for the 2006 project year; 60% for the 2005 project year (8,565 respondents of 14,306 SHARC holders); 62% for the 2004 project year (8,524 respondents of 13,813 SHARC holders); and 65% for the 2003 project year (7,593 respondents of 11,625 SHARC holders). In 2009, the number of valid SHARCs (11,733) was about the same as 2008 (11,565), but 13% lower than the 6-year average from 2003–2008 (Table 19). Nonrenewed SHARCs probably account for most of this decline. The largest portion of this decline in the number of SHARC holders was in the tribal segment: 4,009 SHARCs in 2009 compared to 7,446 in 2007, a decline of 46%. Tribal SHARCs are valid for 4 years, so those issued in 2003, the first year of the new fishery, expired in 2007. In comparison, the number of nontribal SHARC holders dropped just 5% from 2007 (7,601 SHARCs) to 2008 (7,249 SHARCs), and increased to 7,724 in 2009. Nontribal SHARCs are valid for 2 years, so there have been several rounds of expirations and renewals since 2003, in contrast to the tribal SHARC group. The next section of the report discusses an analysis of SHARC expiration and renewal patterns and identifies some implications of these patterns for future harvest estimates.

Based on the survey returns, an estimated 5,296 individuals participated in the Alaska subsistence halibut fishery in 2009. This is a slight decrease of 0.1% from the estimated 5,303 SHARC holders who subsistence fished for halibut in Alaska in 2008, but is 6% lower than the 6-year average from 2003–2008. The estimated subsistence harvest of halibut in Alaska in 2009 is 45,434 fish and 861,359 lb ($\pm 4\%$). In comparison, the 2008 estimated subsistence halibut harvest was 48,604 fish and 886,988 lb (net weight) ($\pm 3.0\%$); the 2007 estimated subsistence halibut harvest was 53,697 fish and 1,032,293 lb ($\pm 4.1\%$); the 2006 estimated subsistence halibut harvest was 54,089 fish and 1,125,312 lb ($\pm 2.9\%$); the 2005 estimated subsistence halibut harvest was 55,875 fish and 1,178,222 lb (net weight) ($\pm 3.0\%$); the 2004 estimated subsistence halibut harvest was 52,412 halibut and 1,193,162 net pounds ($\pm 1.5\%$), and 43,926 halibut for 1,041,330 lb ($\pm 4\%$) were harvested in the subsistence fishery in 2003. As measured in pounds, the 2009 subsistence halibut harvest was about 3% lower than the harvest in 2008 and 20% lower than the 6-year average from 2003–2008 (Table 18). The total estimated harvests for 2003–2009 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; NPFMC 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%. Average harvests per fisher were lower in 2009 (8.6 halibut per fisher for 163 lb) compared to 2008 (9.2 halibut per fisher for 167 lb), 2007 (9.1 halibut per fisher for 174 lb), and 2006 (9.2 halibut per fisher for 190 lb). Of the 6 previous project years, average harvests were highest in 2005 (9.9 halibut per fisher for 210 lb). In the first 2 years of the project, averages were 8.8 halibut per fisher for 199 lb in 2004 and 8.9 halibut per fisher for 211 lb in 2003. Of the

7 project years, the average weight of subsistence halibut declined from 23.7 lb in 2003 to 18.2 lb in 2008 (a decline of 23%) but rose slightly to 19.0 lb in 2009 (Table 19).

After 7 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 and 2009 may in part be a consequence of reduced participation in the SHARC program, especially among eligible tribal members. As the community case studies demonstrate, however, a number of factors appear to have caused the differences in harvest estimates over the 7 project years, and these differ by community. Some were methodological (St. Paul, for example), while other factors were probably linked to more thorough and accurate documentation of harvests (Cordova and Sand Point, for example) rather than a true increase.

In 2009, most subsistence halibut were harvested with setline (stationary) gear (72%) and the rest with hand-operated gear (28%). Similarly, in 2008, most subsistence halibut were harvested with setline gear (74%) and the rest with hand-operated gear (26%); in 2007, 69% of the subsistence halibut were taken with setline gear; in 2006, 70% of the subsistence halibut were taken with setline gear; in 2005, 70% of the subsistence halibut were harvested with setline gear; in 2004, 74% of the subsistence halibut were harvested with setline gear; and in 2003, setlines accounted for 72% of the harvest.

The largest portion of the Alaska subsistence halibut harvest in 2009 occurred in Regulatory Area 2C (Southeast Alaska), at 53% (456,997 lb), followed by Area 3A (Southcentral Alaska) at 38% (328,480 lb), Area 4A (Eastern Aleutian Islands) at 4% (33,499 lb), Area 3B (Alaska Peninsula) at 3% (25,492 lb), Area 4E (East Bering Sea Coast) at 1% (8,749 lb), Area 4C (Pribilof Islands) 1% (6,323 lb), Area 4B (Western Aleutian Islands) at less than 1% (1,175 lb), and Area 4D (Central Bering Sea) at less than 1% (644 lb). In 2003–2008, Area 2C (Southeast Alaska) and Area 3A (Southcentral Alaska) also accounted for most of the subsistence harvests. The proportion of the statewide subsistence halibut harvest occurring in Area 2C (Southeast Alaska) has declined from 60% in 2003 and 57% in 2004 to 51% in 2005, 52% in 2006, 51% in 2007, 52% in 2008, and 53% in 2009. Correspondingly, the portion occurring in Area 3A (Southcentral Alaska) increased from 27% in 2003 to 34% in 2004, 36% in 2005, 34% in 2006, 36% in 2007, 38% in 2008, and 38% in 2009. Subsistence harvests accounted for 1.2% of the total halibut removals in Alaska waters in 2009, compared to 1.3% in 2008, 1.4% in 2007, 1.5% in 2006, 1.5% in 2005, 1.5% in 2004, and 1.3% in 2003.

Subsistence halibut fishers had an estimated incidental harvest of 13,315 rockfish in 2009. This is a decrease of 7% from the estimate of 14,346 rockfish for 2008 and a decrease of 14% from the 6-year average from 2003–2008 (Table 19). There were 1,427 SHARC holders who harvested rockfish while subsistence halibut fishing in 2009, compared to 1,404 in 2008, 1,568 in 2007, 1,529 in 2006, 1,544 in 2005, 1,616 in 2004, and 1,239 in 2003. Most of the incidental rockfish harvests in 2009 occurred in Area 2C (67%), as they had in 2008 (70%), 2007 (68%), 2006 (68%), 2005 (63%), 2004 (68%), and 2003 (67%).

In 2009, subsistence halibut fishers harvested an estimated 3,390 lingcod in the subsistence halibut fishery. This is a decrease of 3% from the estimate of 3,479 lingcod harvested in the subsistence halibut fishery in 2008, and a decrease of 0.4% from the 6-year average from 2003–2008. In total, 900 SHARC holders harvested lingcod while subsistence halibut fishing in 2009. This is 5% higher than the 854 SHARC holders who had an incidental harvest of lingcod in 2008, and 3% higher than the 6-year average from 2003–2008 (Table 19). As with rockfish, most of the incidental lingcod harvests took place in Area 2C in 2009 (60%), 2008 (71%), 2007 (66%), 2006 (59%), 2005 (56%), 2004 (56%) and 2003 (51%).

As discussed above, although comparisons of the 2003–2009 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 2003–2009 are similar to earlier estimates based on household surveys. This is significant in that these communities account for a very large percentage of the total harvest. We conclude that the 7 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. The estimates can be further evaluated as additional years of harvest data are collected. Continued documentation of the subsistence harvests is also necessary for any meaningful discussion of long-term trends in the fishery.

SHARC EXPIRATION AND RENEWAL PATTERNS, 2003–2009

Since the current federal subsistence halibut regulations came into effect in 2003, 19,603 individuals have obtained SHARCs. SHARCs must be renewed periodically: rural SHARCs every 2 years and tribal SHARCs every 4 years. Continuing participation in the SHARC program by subsistence halibut fishers is essential for achieving reliable harvest estimates.

Of the 19,603 SHARC holders, 7,870 (40.1%) have not renewed their SHARCs, including 49.7% of tribal SHARC holders and 33.6% of rural SHARC holders. The remaining 11,733 SHARCs were active in 2009 (59.9% of all SHARCs issued), either being renewed one or more times or not yet being subject to renewal. This includes 4,009 tribal SHARCs (50.3% of all Tribal SHARCs that have been issued) and 7,724 rural SHARCs (66.4%) (Figure 35).

SHARC holders who did not renew their SHARCs were more likely than currently active SHARC holders to have never responded to the harvest survey or to never have participated in the subsistence halibut fishery (Table 20, Figure 36). Of all SHARC holders, 27% of nonrenewals had never responded to the survey, compared to 15% of currently active SHARC holders. Additionally, 33% of expired SHARCs had not been fished; 13% of active SHARC holders have not fished. This pattern exists within each SHARC type as well. Of tribal SHARC holders, 29% who did not renew their SHARC never responded to the survey, compared to 19% of currently active tribal SHARC holders. Also, 41% of expired tribal SHARCs never were fished, compared to 21% of active tribal SHARCs. Of all rural SHARC holders whose SHARCs have expired, 25% never responded to the survey and 25% did not fish. Of active rural SHARCs, 12% have not responded to the survey and 8% have never fished.

This finding suggests that over time, the set of active SHARC holders has become more likely to include individuals who will respond to the survey and participate in the subsistence halibut fishery. The trend is more pronounced for tribal SHARC holders, most likely because, as discussed above, this group initially included a large percentage young tribal members and elders who did not actively participate in the fishery.

However, 40% of expired SHARCs were held by individuals who had participated in the subsistence halibut fishery, including 30% of expired tribal SHARCs and 50% of expired rural SHARCs (Figure 36). Of all SHARC holders that reported some subsistence fishing activity, 27% did not renew their SHARC, including 33% of tribal SHARC holders who fished and 24% of rural SHARC holders who fished (Figure 35). The reasons why subsistence halibut fishers did not renew their SHARCs are unknown. If a substantial number of these individuals have continued to participate in the subsistence halibut fishery without renewing their SHARC, an underestimate of future subsistence halibut harvests may result.

There were 22 tribes with 13 or more individuals who obtained SHARCs since 2003 that have SHARC renewal rates of less than 50%. In total, 2,590 members of these tribes obtained SHARCs, 33% of all tribal SHARC holders, and 1,933 of these SHARCs (75%) were not renewed, 49% of all nonrenewed tribal SHARCs. Of the 963 members of these tribes who held SHARCs and participated in the subsistence halibut fishery, 62% did not renew their SHARCs. Nonrenewal rates for subsistence fishers among this group of tribes ranged from 25% to 100%. This finding suggests a trend in at least some tribes of subsistence fishers dropping out of the SHARC program, which may result in an underestimate of the subsistence halibut harvest in the future.

In summary, this analysis of renewal patterns for SHARC holders suggests two trends that may have opposite effects on subsistence halibut harvest estimates. First, it appears that individuals who did not respond to the survey or did not participate in the fishery were less likely than those who fished to renew their SHARCs. Thus nonfishers may have been overrepresented in the first several years of the harvest survey, and been over-represented in the nonrespondent group. If so, harvests for the early years of the program may have been overestimated. Second, it appears that a notable portion of subsistence fishers have not renewed their SHARCs. If so, future estimates of subsistence halibut harvests will be too low, because they are based solely on responses to the survey that is mailed to SHARC holders.

RECOMMENDATIONS

We conclude this report with the following recommendations based on experiences during the 7 years of this project. These suggestions are similar to those that were offered at the conclusion of the earlier years' reports (Fall et al. 2004:30–31; Fall et al. 2005:34–36; Fall et al. 2006:37–38; Fall et al. 2007:39–40; Fall and Koster 2008:39–40; Fall and Koster 2010:35–36).

1. The harvest assessment program for the Alaska subsistence halibut fishery should continue.²⁵ The 7-year effort just completed developed a time series for assessment of harvest trends in the future. As discussed above, the methods used for 2003–2009 (a short postal survey with at least one follow-up mailing, supplemented by community outreach, interviewing in selected communities, and partnerships with tribal governments), were successful and should be retained to facilitate comparisons across project years. It should be noted, however, that due to reduced funding and rising costs, 2009 was the first study year in which only 2 mailings took place and supplemental surveys occurred in only 2 communities. Such reductions may result in lower response rates in the future. A recommendation in the final report for the third year of the program was that “implementation of a program to collect harvest data in season in selected communities should be considered on a trial basis to help supplement and evaluate the data collected through the postal survey” (Fall et al. 2006:37). The Division of Subsistence conducted an inseason harvest monitoring project for the subsistence halibut fishery in Sitka and Kodiak in 2006 with funding provided by NMFS. Findings were presented in Fall et al. (2009). Consideration should be given in the future to inseason monitoring programs in other communities as a method to compare harvest estimates with those from the mailed surveys.
2. As noted in Chapter 1, most likely due to expirations and nonrenewals, total valid SHARCs declined from 15,047 in 2007 to 11,565 in 2008 and 11,733 in 2009, with most of this decline occurring in the tribal segment of SHARC holders (7,446 in 2007, 4,316 in 2008, 4,009 in 2009). Such changes in the registration of potential subsistence halibut fishers has implications for future harvest estimates and are another reason why monitoring of the harvests should continue.
3. Additionally, analysis suggests that a significant number of subsistence halibut fishers may not have renewed their SHARCs. This finding suggests that additional outreach among eligible tribes and rural areas is necessary to maximize enrollment of fishers in the SHARC program.
4. Specifically, additional or renewed outreach is needed in several communities outside of Area 2C (the only area where outreach took place in the last study year), including Unalaska–Dutch Harbor, Atka, Tununak, Toksook Bay, St. Paul, Sand Point, and Savoonga, based on relatively low response rates or unexpectedly low numbers of SHARCs issued, especially if

²⁵ Through an amendment to award number NA07NMF4370170, the Division of Subsistence received funding in 2010 from NOAA to conduct a eighth year of surveys to document subsistence harvests that occurred in 2010.

more reliable harvest estimates are desired in areas 3B and 4, and given reduced funds to conduct the project. Contracts with tribal governments or local hiring in communities of Area 2C, such as Sitka, Angoon, Hydaburg, Saxman, and Ketchikan, should be continued in future harvest monitoring efforts in those communities.

5. Given the drop in SHARC registrations, community outreach is also necessary in Area 4E (East Bering Sea Coast) if reliable harvest estimates are to be produced. There are many communities in this very large geographic area but, compared to areas 2C and 3A, relatively few SHARCs have been issued and a smaller percentage of the statewide subsistence halibut harvest occurs in Area 4E. Through the 2007 project year, the focus of outreach in Area 4E was on those communities that are known to have relatively large traditional harvests of halibut. Harvests in many other communities in this area are likely to be small. However, due to funding cuts, no outreach or supplemental surveys took place in any Area 4E community. Although a major outreach effort that would include most of communities of 4E would be expensive and probably unnecessary, communications with tribal governments could result in more enrollments in the SHARC program and more confidence in the survey results.
6. If rockfish or lingcod incidental harvests in the halibut subsistence fishery continue to be of interest to managers in some areas, more specific data collection tools need to be developed to collect rockfish harvest data at the species level in particular communities. This should be done only in selected areas of concern given the additional costs to data collection and analysis that this will entail (see Wolfe 2002 for more discussion of collection of rockfish harvest data through the SHARC survey). Such research should occur only through partnerships with local communities and tribes, and should include a combination of participant observation, key respondent interviewing, and survey methods. A model is the study of subsistence harvests of rockfish in Nanwalek, Port Graham, Chenega Bay, and Sitka conducted by the Division of Subsistence with funding from the North Pacific Research Board (Turek et al. 2009).
7. Further evaluation of several years of sport fishing harvest data achieved through the postal *Statewide Harvest Survey* administered by the Division of Sport Fish should take place for the larger rural communities participating in the subsistence halibut fishery. (Analysis of these data for Sitka was conducted as a pilot effort for 2004. See Fall et al. 2005:22–24.) As discussed in Chapter 2 and Chapter 3, many SHARC holders also reported that they sport fished for halibut in 2003–2009. It will be important to try to determine if a shift in harvest from the “sport” category to the “subsistence” category is occurring, in order to evaluate trends in the subsistence fishery and the effect of the new subsistence halibut regulations on fishing patterns. Also, as noted in Chapter 3, comparisons of community harvest estimates from previous research require consideration of sport harvests as well as harvests under the new subsistence regulations. Such comparisons are also important for evaluating the subsistence harvest assessment program and the performance of the new subsistence regulations.
8. Consideration should be given to funding and implementing ethnographic investigations in key halibut fishing communities to evaluate the effects of the new subsistence fishing regulations on fishing patterns. These studies would entail more detailed interviewing of fishers regarding changes in gear choice, fishing effort, harvest amounts, incidental harvests of rockfish or lingcod, or other fishing activities that have resulted from the regulatory changes. These interviews could also investigate traditional knowledge about local halibut stocks (as well as local stocks of rockfish and lingcod) that might prove useful to management agencies, communities, and tribes for future management of the subsistence, sport, and commercial halibut fisheries in Alaska.

9. Results of the 7 years of survey data and the inseason project 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 continuing harvest monitoring program.

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TABLES AND FIGURES

Table 1.—Population of rural communities eligible to participate in the Alaska subsistence halibut fishery, 2000 and 2009.

Community ^a	Regulatory area	Population: 2000		Population: 2009
		Total	Alaska Native ^d	
Angoon	2C	572	419	442
Coffman Cove	2C	199	12	152
Craig	2C	1,397	432	1,400
Edna Bay	2C	49	2	49
Elfin Cove	2C	32	0	25
Gustavus	2C	429	32	451
Haines	2C	1,811	332	1,624
Hollis	2C	139	13	193
Hoonah	2C	860	597	764
Hydaburg	2C	382	342	340
Hyder	2C	97	4	87
Kake	2C	710	530	497
Kasaan	2C	39	19	56
Klawock	2C	854	496	782
Klukwan	2C	139	123	72
Metlakatla	2C	1,375	1,125	1,385
Meyers Chuck	2C	21	2	16
Naukati Bay	2C	135	13	118
Pelican	2C	163	42	122
Petersburg	2C	3,224	388	2,973
Point Baker	2C	35	3	11
Port Alexander	2C	81	11	61
Port Protection	2C	63	7	72
Saxman	2C	431	302	434
Sitka	2C	8,835	2,178	8,627
Skagway	2C	862	44	865
Tenakee Springs	2C	104	5	104
Thorne Bay	2C	552	27	424
Whale Pass	2C	58	2	60
Wrangell	2C	2,308	550	1,892
Subtotal, Area 2C		25,956	8,052	24,098
Akhiok	3A	80	75	51
Chenega Bay	3A	86	67	71
Cordova	3A	2,454	368	2,126
Karluk	3A	27	26	38
Kodiak ^b	3A	12,973	1,697	13,129
Larsen Bay	3A	115	91	79
Nanwalek	3A	177	165	226
Old Harbor	3A	237	203	193
Ouzinkie	3A	225	197	170
Port Graham	3A	171	151	137
Port Lions	3A	253	163	200
Seldovia	3A	286	66	407
Tatitlek	3A	107	91	83
Yakutat	3A	680	375	628
Subtotal, Area 3A		17,871	3,735	17,538

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Table 1.–Page 2 of 3.

Community ^a	Regulatory area	Population: 2000		Population: 2009
		Total	Alaska Native ^d	
Chignik	3B	79	48	62
Chignik Lagoon	3B	103	85	73
Chignik Lake	3B	145	127	105
Cold Bay	3B	88	15	84
False Pass	3B	64	42	41
Ivanof Bay	3B	22	21	0
King Cove	3B	792	379	744
Nelson Lagoon	3B	83	68	60
Perryville	3B	107	105	122
Sand Point	3B	952	421	1,001
Subtotal, Area 3B		2,435	1,311	2,292
Akutan	4A	713	117	846
Nikolski	4A	39	27	33
Unalaska	4A	4,283	397	3,662
Subtotal, Area 4A		5,035	541	4,541
Adak	4B	316	118	165
Atka	4B	92	84	71
Subtotal, Area 4B		408	202	236
St. George Island	4C	152	140	111
St. Paul Island	4C	532	460	459
Subtotal, Area 4C		684	600	570
Gambell	4D	649	622	666
Savoonga	4D	643	614	721
Diomedes	4D	146	137	117
Subtotal, Area 4D		1,438	1,373	1,504
Alakanuk	4E	652	638	686
Aleknagik	4E	221	187	229
Brevig Mission	4E	276	254	358
Bethel	4E	5,471	3,719	5,803
Chefornak	4E	394	386	475
Chevak	4E	765	734	945
Clark's Point	4E	75	69	61
Council Anvsa ^c	4E	0	0	8
Dillingham	4E	2,466	1,503	2,264
Eek	4E	280	271	282
Egegik	4E	116	89	73
Elim	4E	313	297	288
Emmonak	4E	767	720	774
Golovin	4E	144	133	154
Goodnews Bay	4E	230	216	237
Hooper Bay	4E	1,014	971	1,158
King Salmon	4E	442	133	383
Kipnuk	4E	644	631	671
Kongiganak	4E	359	349	465
Kotlik	4E	591	568	618
Koyuk	4E	297	280	358
Kwigillingok	4E	338	331	365
Levelock	4E	122	116	88
Manokotak	4E	399	378	438
Mekoryuk	4E	210	203	174

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Table 1.–Page 3 of 3.

Community ^a	Regulatory area	Population: 2000		Population: 2009
		Total	Alaska Native ^d	
Naknek	4E	678	319	516
Napakiak	4E	353	341	337
Napaskiak	4E	390	383	428
Newtok	4E	321	311	355
Nightmute	4E	208	197	264
Nome	4E	3,505	2,057	3,468
Oscarville	4E	61	61	109
Pilot Point	4E	100	86	66
Platinum	4E	41	38	57
Port Heiden	4E	119	93	83
Quinhagak	4E	555	540	680
Scammon Bay	4E	465	453	528
Saint Michael	4E	368	343	446
Shaktoolik	4E	230	218	231
Sheldon Point	4E	164	154	156
Shishmaref	4E	562	531	606
Solomon Anvsa	4E	4	3	0
South Naknek	4E	137	115	68
Stebbins	4E	547	518	605
Teller	4E	268	248	261
Togiak	4E	809	750	820
Toksook Bay	4E	532	519	596
Tuntutuliak	4E	370	366	384
Tununak	4E	325	315	330
Twin Hills	4E	69	65	74
Ugashik	4E	11	9	15
Unalakleet	4E	747	655	725
Wales	4E	152	137	148
White Mountain	4E	203	175	202
Subtotal, Area 4E		28,880	23,176	29,913
Total		82,707	38,990	80,692

Source U.S. Census Bureau 2001; Alaska Department of Labor and Workforce Development 2010.

- 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. No Alaska Native population data are available for 2008.
- e. Nontribal residents of Naukati Bay were not eligible for SHARCS until 2008. This community was not included in population estimates for previous study years.

Table 2.–Project chronology, 2009 study year.

Date	Event/Action
October 1, 2009	Award No. NA04NMF4370170 between NMFS and ADF&G amended to support the research for study year 2009
December 31, 2009	Distribution of final report and 4 page summary for study year 2008
January 27, 2010	Presentation of 2008 study findings at IPHC annual meeting, Seattle, WA
February 26, 2010	First mailing of survey forms
April 30, 2010	Second mailing of survey forms
April through June 2010	Administration of surveys in Sitka and Hydaburg
April 15, 2010	Submission of semi-annual report on project progress to NMFS
October 25, 2010	Submission of semi-annual report on project progress to NMFS
November 19, 2010	Release of public review draft of final report
December 8, 2010	Presentation of study findings, NPFMC, Anchorage
January 4, 2011	Completion of revised, final report

Table 3.–Sample achievement.

Tribal name	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Angoon Community Association	2C	109	27	1	82	15	0	0	0	0	109	42	0	42	38.5%	1
Aukquan Traditional Council	2C	1														
Central Council Tlingit And Haida Indian Tribes	2C	503	165	30	322	49	19	0	0	0	503	214	4	218	43.3%	49
Chilkat Indian Village	2C	23	15	2	7	3	1	0	0	0	23	18	0	18	78.3%	3
Chilkoot Indian Association	2C	48	22	1	25	5	1	0	0	0	48	27	0	27	56.3%	2
Craig Community Association	2C	63	19	2	43	4	3	0	0	0	63	23	2	25	39.7%	5
Douglas Indian Association	2C	16	2	0	14	2	1	0	0	0	16	4	0	4	25.0%	1
Hoonah Indian Association	2C	144	59	4	87	10	4	0	0	0	144	69	0	69	47.9%	7
Hydaburg Cooperative Association	2C	123	31	5	97	5	5	0	0	0	123	36	70	106	86.2%	10
Ketchikan Indian Corporation	2C	512	144	31	359	31	16	0	0	0	512	175	1	176	34.4%	46
Klawock Cooperative Association	2C	74	29	3	43	3	2	0	0	0	74	32	0	32	43.2%	5
Metlakatla Indian Community, Annette Island Reserve	2C	178	53	4	128	16	4	0	0	0	178	69	1	70	39.3%	8

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Table 3.–Page 2 of 15.

Tribal name	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Organized Village of Kake	2C	84	39	2	45	15	1	0	0	0	84	54	0	54	64.3%	3
Organized Village of Kasaan	2C	9	4	3	5	0	0	0	0	0	9	4	0	4	44.4%	3
Organized Village of Saxman	2C	39	9	5	26	4	0	0	0	0	39	13	0	13	33.3%	5
Petersburg Indian Association	2C	73	22	2	51	13	2	0	0	0	73	35	0	35	47.9%	4
Sitka Tribe of Alaska	2C	288	81	15	196	21	14	0	0	0	288	102	62	164	56.9%	29
Skagway Village	2C	4														
Wrangell Cooperative Association	2C	95	58	4	37	10	1	0	0	0	95	68	0	68	71.6%	5
Subtotal, Area 2C		2,386	781	114	1570	207	74	0	0	0	2386	988	140	1128	47.28%	186
Kenaitze Indian Tribe	3A	118	40	5	79	15	4	0	0	0	118	55	0	55	46.6%	9
Lesnoi Village (Woody Island)	3A	72	30	4	44	7	5	0	0	0	72	37	0	37	51.4%	9
Native Village of Afognak	3A	24	9	1	14	5	1	0	0	0	24	14	0	14	58.3%	2
Native Village of Akhiok	3A	12	3	2	8	1	3	0	0	0	12	4	0	4	33.3%	5
Native Village of Chenega	3A	18	3	0	15	1	0	0	0	0	18	4	0	4	22.2%	0
Native Village of Eyak	3A	79	33	3	44	6	1	0	0	0	79	39	0	39	49.4%	4
Native Village of Karluk	3A	1														
Native Village of Larsen Bay	3A	33	11	1	22	7	0	0	0	0	33	18	0	18	54.5%	1

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Table 3.–Page 3 of 15.

Tribal name	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Native Village of Nanwalek	3A	43	8	0	34	8	0	0	0	0	43	16	0	16	37.2%	0
Native Village of Ouzinkie	3A	36	17	0	19	0	0	0	0	0	36	17	0	17	47.2%	0
Native Village of Port Graham	3A	40	10	3	29	5	0	0	0	0	40	15	1	16	40.0%	3
Native Village of Port Lions	3A	35	11	0	25	5	0	0	0	0	35	16	0	16	45.7%	0
Native Village of Tatitlek	3A	23	10	0	14	2	1	0	0	0	23	12	0	12	52.2%	1
Ninilchik Village	3A	82	25	3	53	7	2	0	0	0	82	32	2	34	41.5%	5
Seldovia Village Tribe	3A	53	22	1	32	7	2	0	0	0	53	29	0	29	54.7%	3
Shoonaq' Tribe of Kodiak	3A	133	54	5	78	13	8	0	0	0	133	67	1	68	51.1%	13
Village of Kanatak	3A	12	8	1	3	0	2	0	0	0	12	8	0	8	66.7%	3
Village of Old Harbor	3A	62	16	4	43	9	0	0	0	0	62	25	0	25	40.3%	4
Village of Salamatoff	3A	23	13	0	10	2	2	0	0	0	23	15	0	15	65.2%	2
Yakutat Tlingit Tribe	3A	38	15	0	24	8	1	0	0	0	38	23	0	23	60.5%	1
Subtotal, Area 3A		937	339	33	590	108	32	0	0	0	937	447	4	451	48.13%	65
Agdaagux Tribe of King Cove	3B	69	28	0	43	6	1	0	0	0	69	34	0	34	49.3%	1
Chignik Lake Village	3B	10	3	1	6	1	0	0	0	0	10	4	0	4	40.0%	1
Ivanoff Bay Village	3B	8	2	0	6	1	0	0	0	0	8	3	0	3	37.5%	0
Native Village of Belkofski	3B	4														

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Table 3.–Page 4 of 15.

Tribal name	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Native Village of Chignik	3B	7	4	0	3	2	0	0	0	0	7	6	0	6	85.7%	0
Native Village of Chignik Lagoon	3B	21	15	0	7	1	0	0	0	0	21	16	0	16	76.2%	0
Native Village of False Pass	3B	1														
Native Village of Nelson Lagoon	3B	3														
Native Village of Perryville	3B	22	11	0	13	3	1	0	0	0	22	14	0	14	63.6%	1
Native Village of Unga	3B	11	4	0	8	0	0	0	0	0	11	4	0	4	36.4%	0
Pauloff Harbor Village	3B	45	7	0	38	3	0	0	0	0	45	10	0	10	22.2%	0
Qagan Toyagungin Tribe of Sand Point Village	3B	84	37	3	50	8	2	0	0	0	84	45	0	45	53.6%	5
Subtotal, Area 3B		285	112	4	181	28	4	0	0	0	285	140	0	140	49.12%	8
Native Village of Akutan	4A	18	7	0	15	1	0	0	0	0	18	8	0	8	44.4%	0
Qawalingin Tribe of Unalaska	4A	37	12	0	25	3	0	0	0	0	37	15	1	16	43.2%	0
Subtotal, Area 4A		55	19	0	40	4	0	0	0	0	55	23	1	24	43.64%	0
Native Village of Atka	4B	5														
Subtotal, Area 4B		5	2	0	3	1	1	0	0	0	5	3	0	3	60.00%	1
Pribilof Islands Aleut Community of St. George	4C	5														

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Table 3.–Page 5 of 15.

Tribal name	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Pribilof Islands																
Aleut Community of St. Paul	4C	44	5	2	39	8	1	0	0	0	44	13	0	13	29.5%	2
Subtotal, Area 4C		49	7	2	42	8	1	0	0	0	49	15	0	15	30.61%	2
Native Village of Diomedes (Inalik)	4D	1														
Native Village of Gambell	4D	1														
Native Village of Savoonga	4D	18	8	0	11	0	0	0	0	0	18	8	0	8	44.4%	0
Subtotal, Area 4D		20	9	0	12	1	0	0	0	0	20	10	0	10	50.00%	0
Chevak Native Village (Kashunamiut)	4E	6	3	0	3	0	0	0	0	0	6	3	0	3	50.0%	0
Chinik Eskimo Community	4E	1														
Egegik Village	4E	1														
King Island Native Community	4E	1														
Levelock Village	4E	1														
Manokotak Village	4E	1														
Naknek Native Village	4E	9	1	2	6	0	0	0	0	0	9	1	0	1	11.1%	2
Native Village of Aleknagik	4E	6	2	0	4	1	0	0	0	0	6	3	0	3	50.0%	0
Native Village of Brevig Mission	4E	1														
Native Village of Council	4E	4														

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Table 3.–Page 6 of 15.

Tribal name	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Native Village of Dillingham (Curyung)	4E	16	6	0	10	1	1	0	0	0	16	7	0	7	43.8%	1
Native Village of Eek	4E	7	2	0	5	3	0	0	0	0	7	5	0	5	71.4%	0
Native Village of Goodnews Bay (Mumtraq)	4E	4														
Native Village of Hooper Bay	4E	18	4	0	14	1	0	0	0	0	18	5	0	5	27.8%	0
Native Village of Kanakanak	4E	1														
Native Village of Kipnuk	4E	13	2	0	11	0	0	0	0	0	13	2	0	2	15.4%	0
Native Village of Kongiganak	4E	6	3	0	3	0	0	0	0	0	6	3	0	3	50.0%	0
Native Village of Koyuk	4E	1														
Native Village of Kwigillingok	4E	46	1	0	45	4	0	0	0	0	46	5	0	5	10.9%	0
Native Village of Kwinhagak	4E	4														
Native Village of Mekoryuk	4E	6	3	0	3	2	0	0	0	0	6	5	0	5	83.3%	0
Native Village of Nightmute	4E	5														
Native Village of Port Heiden	4E	1														
Native Village of Scammon Bay	4E	5														

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Table 3.–Page 7 of 15.

Tribal name	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Native Village of Toksook Bay (Nunakauiyak)	4E	33	5	1	27	7	0	0	0	0	33	12	0	12	36.4%	1
Native Village of Tununak	4E	13	5	0	8	1	0	0	0	0	13	6	0	6	46.2%	0
Native Village of Unalakleet	4E	3														
Native Village of Wales	4E	1														
Newtok Village	4E	1														
Nome Eskimo Community	4E	15	4	0	13	0	1	0	0	0	15	4	0	4	26.7%	1
Orutsararmuit Native Village	4E	9	4	0	6	1	0	0	0	0	9	5	0	5	55.6%	0
South Naknek Village	4E	2														
Stebbins Community Association	4E	4														
Traditional Village of Togiak	4E	7	2	0	5	1	0	0	0	0	7	3	0	3	42.9%	0
Twin Hills Village	4E	1														
Ugashik Village	4E	2														
Village of Chefornak	4E	15	0	0	15	5	0	0	0	0	15	5	0	5	33.3%	0
Village of Clark's Point	4E	1														
Village of Kotlik	4E	1														
Subtotal, Area 4E		272	60	3	213	32	5	0	0	0	272	92	0	92	33.82%	8
Tribal Name Subtotals		4,009	1,329	156	2,651	389	117	0	0	0	4,009	1,718	145	1,863	46.5%	270

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Table 3.–Page 8 of 15.

Rural community	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Angoon	2C	19	9	0	11	2	0	0	0	0	19	11	0	11	57.9%	0
Coffman Cove	2C	55	37	1	21	6	1	0	0	0	55	43	0	43	78.2%	2
Craig	2C	417	204	5	228	48	15	0	0	0	417	252	0	252	60.4%	19
Edna Bay	2C	47	20	2	35	7	1	0	0	0	47	27	0	27	57.4%	3
Elfin Cove	2C	18	11	1	8	1	1	0	0	0	18	12	0	12	66.7%	1
Gustavus	2C	83	47	3	38	8	6	0	0	0	83	55	0	55	66.3%	8
Haines	2C	470	317	6	177	50	3	0	0	0	470	367	0	367	78.1%	9
Hollis	2C	44	31	1	17	6	1	0	0	0	44	37	0	37	84.1%	2
Hoonah	2C	119	75	4	44	6	5	0	0	0	119	81	0	81	68.1%	9
Hydaburg	2C	15	9	0	6	0	0	0	0	0	15	9	3	12	80.0%	0
Hyder	2C	42	25	1	16	5	0	0	0	0	42	30	0	30	71.4%	1
Kake	2C	43	21	4	19	5	2	0	0	0	43	26	0	26	60.5%	6
Kasaan	2C	10	6	0	4	3	0	0	0	0	10	9	0	9	90.0%	0
Klawock	2C	146	75	8	76	26	5	0	0	0	146	101	0	101	69.2%	9
Klukwan	2C	2														
Metlakatla	2C	39	7	3	29	5	1	0	0	0	39	12	0	12	30.8%	4
Meyers Chuck	2C	9	9	0	1	0	0	0	0	0	9	9	0	9	100.0%	0
Naukatl Bay	2C	24	17	1	7	2	0	0	0	0	24	19	0	19	79.2%	1
Pelican	2C	47	27	2	23	0	1	0	0	0	47	27	0	27	57.4%	2
Petersburg	2C	958	459	12	524	195	18	0	0	0	958	654	1	655	68.4%	29
Port Alexander	2C	32	14	1	16	5	1	0	0	0	32	19	0	19	59.4%	2
Port Protection	2C	19	12	0	9	1	0	0	0	0	19	13	0	13	68.4%	0
Pt. Baker	2C	16	9	0	8	3	0	0	0	0	16	12	0	12	75.0%	0
Saxman	2C	17	6	1	10	2	1	0	0	0	17	8	0	8	47.1%	2
Sitka	2C	1,446	693	34	787	129	50	0	0	0	1,446	822	160	982	67.9%	84
Skagway	2C	58	36	2	22	6	0	0	0	0	58	42	0	42	72.4%	2
Tenakee Springs	2C	51	42	0	14	4	0	0	0	0	51	46	0	46	90.2%	0
Thorne Bay	2C	119	85	0	44	11	1	0	0	0	119	96	2	98	82.4%	1
Whale Pass	2C	25	18	0	8	3	0	0	0	0	25	21	0	21	84.0%	0
Wrangell	2C	414	255	12	165	46	3	0	0	0	414	301	1	302	72.9%	15
Subtotal, Area 2C		4804	2578	104	2367	585	116	0	0	0	4804	3163	167	3330	69.3%	211

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Table 3.–Page 9 of 15.

Rural community	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Akhiok	3A	1														
Chenega Bay	3A	7	7	0	0	0	0	0	0	0	7	7	0	7	100.0%	0
Cordova	3A	536	310	14	225	53	13	0	0	0	536	363	1	364	67.9%	27
Kodiak	3A	1,687	754	54	932	191	58	0	0	0	1,687	945	2	947	56.1%	111
Larsen Bay	3A	10	5	1	4	1	0	0	0	0	10	6	0	6	60.0%	1
Nanwalek	3A	11	4	0	8	2	1	0	0	0	11	6	0	6	54.5%	1
Old Harbor	3A	17	7	1	9	3	0	0	0	0	17	10	0	10	58.8%	1
Ouzinkie	3A	25	9	0	16	3	0	0	0	0	25	12	0	12	48.0%	0
Port Graham	3A	12	6	0	8	1	0	0	0	0	12	7	0	7	58.3%	0
Port Lions	3A	17	5	0	13	2	0	0	0	0	17	7	0	7	41.2%	0
Seldovia	3A	164	100	3	66	16	6	0	0	0	164	116	3	119	72.6%	9
Tatitlek	3A	11	4	0	9	1	0	0	0	0	11	5	0	5	45.5%	0
Yakutat	3A	75	36	2	42	14	0	0	0	0	75	50	0	50	66.7%	2
Subtotal, Area 3A		2573	1248	75	1332	287	78	0	0	0	2573	1535	6	1541	59.9%	152
Chignik	3B	4														
Chignik Lagoon	3B	1														
Chignik Lake	3B	4														
Cold Bay	3B	22	17	2	4	3	0	0	0	0	22	20	0	20	90.9%	2
False Pass	3B	2														
King Cove	3B	27	16	2	9	6	1	0	0	0	27	22	0	22	81.5%	3
Nelson Lagoon	3B	1														
Perryville	3B	1														
Sand Point	3B	22	6	1	15	4	1	0	0	0	22	10	0	10	45.5%	2
Subtotal, Area 3B		84	44	5	36	15	4	0	0	0	84	59	0	59	70.2%	9
Akutan	4A	1														
Nikolski	4A	2														
Unalaska	4A	127	58	5	77	19	3	0	0	0	127	77	0	77	60.6%	8
Subtotal, Area 4A		130	59	5	79	19	3	0	0	0	130	78	0	78	60.0%	8
Adak	4B	26	10	3	13	3	0	0	0	0	26	13	0	13	50.0%	3
Atka	4B	2														
Subtotal, Area 4B		28	11	3	14	3	0	0	0	0	28	14	0	14	50.0%	3

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Table 3.–Page 10 of 15.

Rural community	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
St. George Island	4C	1														
St. Paul Island	4C	2														
Subtotal, Area 4C		3	1	0	2	0	1	0	0	0	3	1	0	1	33.3%	1
Aleknagik	4E	2														
Bethel	4E	3														
Chefornak	4E	1														
Dillingham	4E	41	22	0	21	2	8	0	0	0	41	24	0	24	58.5%	8
Egegik	4E	1														
Hooper Bay	4E	1														
King Salmon	4E	2														
Kongiganak	4E	1														
Manokotak	4E	1														
Mekoryuk	4E	1														
Naknek	4E	4														
Nightmute	4E	2														
Nome	4E	21	12	1	9	1	0	0	0	0	21	13	0	13	61.9%	1
Port Heiden	4E	3														
Quinhagak	4E	2														
South Naknek	4E	1														
Teller	4E	10	5	0	5	1	0	0	0	0	10	6	0	6	60.0%	0
Togiak	4E	2														
Toksook Bay	4E	1														
White Mountain	4E	2														
Subtotal, Area 4E		102	51	1	53	7	9	0	0	0	102	58	0	58	56.9%	10
Rural community subtotals		7,724	3,992	193	3,883	916	211	0	0	0	7,724	4,908	173	5,081	65.8%	394
Tribal–Rural Totals		11,733	5,321	349	6,534	1,305	328	0	0	0	11,733	6,626	318	6,944	59.2%	664

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Table 3.–Page 11 of 15.

City of residence	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Adak	AK	26	11	3	12	0	0	0	0	0	26	11	0	11	42.3%	3
Akhiok	AK	10	3	2	5	1	2	0	0	0	10	4	0	4	40.0%	4
Akiachak	AK	1														
Akutan	AK	17	6	0	14	1	0	0	0	0	17	7	0	7	41.2%	0
Aleknagik	AK	3														
Anchor Point	AK	9	2	1	6	0	0	0	0	0	9	2	0	2	22.2%	1
Anchorage	AK	218	81	11	137	19	25	0	0	0	218	100	1	101	46.3%	36
Angoon	AK	129	35	1	95	16	0	0	0	0	129	51	0	51	39.5%	1
Atka	AK	3														
Auke Bay	AK	5														
Barrow	AK	1														
Bethel	AK	13	4	0	10	2	0	0	0	0	13	6	0	6	46.2%	0
Chefornak	AK	15	0	0	15	5	0	0	0	0	15	5	0	5	33.3%	0
Chenega Bay	AK	8	6	0	2	0	0	0	0	0	8	6	0	6	75.0%	0
Chevak	AK	5														
Chignik	AK	13	8	0	5	3	0	0	0	0	13	11	0	11	84.6%	0
Chignik Lagoon	AK	13	9	0	4	1	0	0	0	0	13	10	0	10	76.9%	0
Chignik Lake	AK	8	4	0	4	0	0	0	0	0	8	4	0	4	50.0%	0
Chiniak	AK	21	12	0	10	0	0	0	0	0	21	12	0	12	57.1%	0
Chugiak	AK	4														
Clarks Point	AK	1														
Coffman Cove	AK	50	34	0	19	6	1	0	0	0	50	40	0	40	80.0%	1
Cold Bay	AK	24	17	2	7	5	0	0	0	0	24	22	0	22	91.7%	2
Cordova	AK	599	338	13	262	59	12	0	0	0	599	397	1	398	66.4%	25
Craig	AK	547	261	8	304	62	15	0	0	0	547	323	2	325	59.4%	22
Dillingham	AK	46	21	1	25	3	7	0	0	0	46	24	0	24	52.2%	8
Douglas	AK	17	3	5	9	1	1	0	0	0	17	4	0	4	23.5%	6
Dutch Harbor	AK	83	31	5	53	14	2	0	0	0	83	45	0	45	54.2%	6
Eagle River	AK	4														
Edna Bay	AK	28	15	0	21	6	0	0	0	0	28	21	0	21	75.0%	0
Eek	AK	6	1	0	5	3	0	0	0	0	6	4	0	4	66.7%	0
Egegik	AK	1														
Elfin Cove	AK	17	10	1	8	1	1	0	0	0	17	11	0	11	64.7%	1

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Table 3.–Page 12 of 15.

City of residence	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Ester	AK	1														
Fairbanks	AK	4														
False Pass	AK	3														
Fritz Creek	AK	1														
Gakona	AK	1														
Gambell	AK	1														
Girdwood	AK	1														
Golovin	AK	1														
Goodnews Bay	AK	4														
Gustavus	AK	81	46	2	38	7	6	0	0	0	81	53	0	53	65.4%	7
Haines	AK	528	345	7	205	61	4	0	0	0	528	406	0	406	76.9%	11
Hollis	AK	1														
Homer	AK	25	14	2	11	0	0	0	0	0	25	14	0	14	56.0%	2
Hoonah	AK	262	135	6	131	16	10	0	0	0	262	151	0	151	57.6%	15
Hooper Bay	AK	17	4	0	13	2	0	0	0	0	17	6	0	6	35.3%	0
Hydaburg	AK	119	32	0	92	5	4	0	0	0	119	37	73	110	92.4%	4
Hyder	AK	40	25	0	15	5	0	0	0	0	40	30	0	30	75.0%	0
Juneau	AK	338	99	31	214	23	16	0	0	0	338	122	1	123	36.4%	47
Kake	AK	127	60	6	63	20	3	0	0	0	127	80	0	80	63.0%	9
Kasaan	AK	15	6	1	10	3	0	0	0	0	15	9	0	9	60.0%	1
Kasilof	AK	13	2	1	10	1	1	0	0	0	13	3	1	4	30.8%	2
Kenai	AK	105	35	5	66	12	4	0	0	0	105	47	0	47	44.8%	9
Ketchikan	AK	598	188	35	406	40	21	0	0	0	598	228	0	228	38.1%	55
King Cove	AK	86	34	2	51	11	1	0	0	0	86	45	0	45	52.3%	3
King Salmon	AK	2														
Kipnuk	AK	12	2	0	10	0	0	0	0	0	12	2	0	2	16.7%	0
Klawock	AK	232	105	13	130	33	7	0	0	0	232	138	0	138	59.5%	16
Klukwan	AK	1														
Kodiak	AK	1826	808	55	1017	207	59	0	0	0	1826	1015	2	1017	55.7%	114
Kongiganak	AK	7	3	0	4	0	0	0	0	0	7	3	0	3	42.9%	0
Kotzebue	AK	2														
Kwigillingok	AK	45	1	0	44	4	0	0	0	0	45	5	0	5	11.1%	0
Larsen Bay	AK	34	11	2	22	7	0	0	0	0	34	18	0	18	52.9%	2

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Table 3.–Page 13 of 15.

City of residence	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Manokotak	AK	1														
Mekoryuk	AK	6	3	0	3	2	0	0	0	0	6	5	0	5	83.3%	0
Metlakatla	AK	207	57	5	152	21	2	0	0	0	207	78	0	78	37.7%	7
Meyers Chuck	AK	9	9	0	1	0	0	0	0	0	9	9	0	9	100.0%	0
Naknek	AK	9	4	0	5	0	0	0	0	0	9	4	0	4	44.4%	0
Nanwalek	AK	51	12	0	39	9	1	0	0	0	51	21	0	21	41.2%	1
Naukati	AK	19	10	1	11	1	0	0	0	0	19	11	0	11	57.9%	1
Nelson Lagoon	AK	1														
Newtok	AK	1														
Nightmute	AK	7	1	0	6	0	0	0	0	0	7	1	0	1	14.3%	0
Nikiski	AK	10	6	0	4	1	0	0	0	0	10	7	0	7	70.0%	0
Nikolski	AK	2														
Ninilchik	AK	41	13	0	27	2	2	0	0	0	41	15	1	16	39.0%	2
Nome	AK	25	14	0	13	1	1	0	0	0	25	15	0	15	60.0%	1
North Pole	AK	4														
Old Harbor	AK	64	17	6	41	10	1	0	0	0	64	27	0	27	42.2%	7
Ouzinkie	AK	59	26	0	33	4	0	0	0	0	59	30	0	30	50.8%	0
Palmer	AK	12	3	1	9	1	0	0	0	0	12	4	0	4	33.3%	1
Pelican	AK	54	31	2	26	0	1	0	0	0	54	31	0	31	57.4%	2
Perryville	AK	20	9	0	12	3	1	0	0	0	20	12	0	12	60.0%	1
Petersburg	AK	1041	492	11	576	213	17	0	0	0	1041	705	1	706	67.8%	27
Pilot Point	AK	2														
Point Baker	AK	22	13	0	12	3	0	0	0	0	22	16	0	16	72.7%	0
Port Alexander	AK	30	14	1	14	3	1	0	0	0	30	17	0	17	56.7%	2
Port Graham	AK	47	14	3	34	6	0	0	0	0	47	20	0	20	42.6%	3
Port Heiden	AK	2														
Port Lions	AK	49	14	0	36	5	0	0	0	0	49	19	0	19	38.8%	0
Port Protection	AK	2														
Port William	AK	2														
Quinhagak	AK	6	2	0	4	0	0	0	0	0	6	2	0	2	33.3%	0
Sand Point	AK	137	48	4	90	11	1	0	0	0	137	59	0	59	43.1%	5
Savoonga	AK	17	7	0	10	0	0	0	0	0	17	7	0	7	41.2%	0

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Table 3.–Page 14 of 15.

City of residence	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response	Response rate	Undeliverable
Saxman	AK	12	1	3	8	1	0	0	0	0	12	2	0	2	16.7%	3
Scammon Bay	AK	1														
Seldovia	AK	165	94	3	73	15	5	0	0	0	165	109	3	112	67.9%	8
Seward	AK	15	11	0	4	0	0	0	0	0	15	11	0	11	73.3%	0
Sitka	AK	1731	772	48	982	152	58	0	0	0	1731	924	228	1152	66.6%	105
Skagway	AK	64	40	2	24	7	0	0	0	0	64	47	0	47	73.4%	2
Soldotna	AK	39	12	2	27	8	1	0	0	0	39	20	0	20	51.3%	3
South Naknek	AK	2														
St. George Island	AK	3														
St. Paul Island	AK	44	7	0	38	8	0	0	0	0	44	15	0	15	34.1%	0
Sterling	AK	5														
Tatitlek	AK	17	4	0	13	2	0	0	0	0	17	6	0	6	35.3%	0
Teller	AK	10	5	0	5	1	0	0	0	0	10	6	0	6	60.0%	0
Tenakee Springs	AK	51	42	0	14	4	0	0	0	0	51	46	0	46	90.2%	0
Thorne Bay	AK	115	86	0	39	11	0	0	0	0	115	97	2	99	86.1%	0
Togiak	AK	9	3	0	6	1	1	0	0	0	9	4	0	4	44.4%	1
Toksook Bay	AK	33	6	0	27	7	0	0	0	0	33	13	0	13	39.4%	0
Trapper Creek	AK	1														
Tununak	AK	11	5	0	6	1	0	0	0	0	11	6	0	6	54.5%	0
Twin Hills	AK	2														
Unalakleet	AK	1														
Unalaska	AK	81	41	1	47	9	2	0	0	0	81	50	1	51	63.0%	3
Valdez	AK	37	19	0	26	2	0	0	0	0	37	21	0	21	56.8%	0
Ward Cove	AK	28	9	1	21	0	0	0	0	0	28	9	0	9	32.1%	1
Wasilla	AK	33	11	2	20	1	0	0	0	0	33	12	0	12	36.4%	2
Waterfall	AK	1														
Whale Pass	AK	8	7	0	2	1	0	0	0	0	8	8	0	8	100.0%	0
Whittier	AK	3														
Willow	AK	2														
Wrangell	AK	530	320	18	215	60	5	0	0	0	530	380	1	381	71.9%	23
Yakutat	AK	109	46	2	67	22	1	0	0	0	109	68	0	68	62.4%	3
Subtotal, AK		11,600	5,269	339	6,456	1,284	307	0	0	0	11,600	6,553	318	6,871	59.2%	633

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Table 3.–Page 15 of 15.

City of residence	Regulatory areas	First mailing			Second mailing			Third mailing			Totals					
		Surveys mailed ^a	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	Surveys mailed	Surveys returned	Surveys returned undeliverable	SHARCs issued	Returned by mail	Returned through staff	Response Rate	Response rate	Undeliverable
Subtotal, non-Alaska residents		133	52	10	78	21	21	0	0	0	133	73	0	73	54.9%	20
City of residence totals		11,733	5,321	349	6,534	1,305	328	0	0	0	11,733	6,626	318	6,944	59.2%	653

a. To protect confidentiality, data for tribes and communities with 5 or fewer surveys mailed are not reported in this table. Subtotals include all tribes and communities.

Table 4.–Estimated subsistence harvests of halibut.

SHARC ^a Regulatory type	area	Return rate		Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch		
		SHARCs issued	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number of pounds ^c	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number of pounds ^c	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Tribal ^b	2C	2,386	1,128	47.3%	807	33.8%	8,014	157,578	331	13.9%	1,026	15,098	100	440	233	2,145
Tribal	3A	937	451	48.1%	426	45.4%	5,368	106,972	166	17.8%	682	12,221	61	328	84	959
Tribal	3B	285	140	49.1%	147	51.7%	1,277	23,975	47	16.4%	173	3,728	28	86	34	873
Tribal	4A	55	24	43.6%	19	33.8%	249	4,725	10	17.5%	14	134	0	0	2	34
Tribal	4B	5	3	60.0%	3	66.7%	82	898	2	33.3%	0	0	0	0	0	0
Tribal	4C	49	15	30.6%	20	40.1%	366	7,280	0	0.0%	0	0	3	5	3	13
Tribal	4D	20	10	50.0%	8	38.8%	39	790	0	0.0%	0	0	1	1	0	0
Tribal	4E	272	92	33.8%	120	44.0%	793	9,728	19	6.9%	103	1,280	6	31	1	20
Subtotal, tribal		4,009	1,863	46.5%	1,549	38.6%	16,187	311,947	574	14.3%	1,998	32,461	197	892	357	4,044
Rural ^b	2C	4,804	3,330	69.3%	2,381	49.6%	15,610	300,156	1,087	22.6%	3,608	53,978	527	1,593	832	6,846
Rural	3A	2,573	1,541	59.9%	1,244	48.3%	12,423	227,473	804	31.2%	4,147	76,030	160	612	217	2,156
Rural	3B	84	59	70.2%	41	49.4%	430	7,543	19	22.9%	75	1,123	4	231	10	130
Rural	4A	130	78	60.0%	61	46.7%	691	12,676	36	27.9%	110	1,727	8	53	12	140
Rural	4B	28	14	50.0%	4	15.5%	25	209	1	4.2%	0	0	0	0	0	0
Rural	4C	3	1	33.3%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Rural	4D	0														
Rural	4E	102	58	56.9%	17	16.5%	69	1,355	7	6.4%	0	0	3	10	0	0
Subtotal, rural		7,724	5,081	65.8%	3,748	48.5%	29,247	549,412	1,954	25.3%	7,940	132,857	702	2,499	1,071	9,271
All ^b	2C	7,190	4,458	62.0%	3,187	44.3%	23,624	457,734	1,418	19.7%	4,634	69,077	627	2,033	1,065	8,991
All	3A	3,510	1,992	56.8%	1,669	47.6%	17,791	334,446	970	27.6%	4,829	88,250	221	940	301	3,115
All	3B	369	199	53.9%	189	51.1%	1,707	31,518	66	17.9%	247	4,851	32	318	44	1,003
All	4A	185	102	55.1%	79	42.9%	940	17,400	46	24.8%	125	1,861	8	53	14	174
All	4B	33	17	51.5%	8	23.2%	107	1,107	3	8.6%	0	0	0	0	0	0
All	4C	52	16	30.8%	20	37.8%	366	7,280	0	0.0%	0	0	3	5	3	13
All	4D	20	10	50.0%	8	38.8%	39	790	0	0.0%	0	0	1	1	0	0
All	4E	374	150	40.1%	137	36.5%	861	11,083	25	6.8%	103	1,280	8	41	1	20
Total		11,733	6,944	59.2%	5,296	45.1%	45,434	861,359	2,528	21.5%	9,938	165,318	900	3,390	1,427	13,315

Source ADF&G Division of Subsistence, SHARC survey, 2009.

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 6, 7, and 9.

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

Table 5.—Age of Subsistence Halibut Registration Certificate holders by SHARC type, 2009.

SHARC Type	Age (years)																				Totals
	Number of SHARC holders																				
	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-89	90-94	95+	
Tribal	16	78	107	179	224	236	247	243	304	389	373	362	252	183	104	62	22	13	1	1	3,396
	0.5%	2.3%	3.2%	5.3%	6.6%	6.9%	7.3%	7.2%	9.0%	11.5%	11.0%	10.7%	7.4%	5.4%	3.1%	1.8%	0.6%	0.4%	0.0%	0.0%	
Rural	17	64	154	258	296	489	634	641	766	1,000	1,154	1,008	800	542	297	136	55	21	3	2	8,337
	0.2%	0.8%	1.8%	3.1%	3.6%	5.9%	7.6%	7.7%	9.2%	12.0%	13.8%	12.1%	9.6%	6.5%	3.6%	1.6%	0.7%	0.3%	0.0%	0.0%	
Total	33	142	261	437	520	725	881	884	1,070	1,389	1,527	1,370	1,052	725	401	198	77	34	4	3	11,733
	0.3%	1.2%	2.2%	3.7%	4.4%	6.2%	7.5%	7.5%	9.1%	11.8%	13.0%	11.7%	9.0%	6.2%	3.4%	1.7%	0.7%	0.3%	0.0%	0.0%	
Toksook Bay	0	1	1	4	4	0	1	3	3	2	0	7	1	5	1	0	0	0	0	0	33
	0.0%	3.0%	3.0%	12.1%	12.1%	0.0%	3.0%	9.1%	9.1%	6.1%	0.0%	21.2%	3.0%	15.2%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Subtotal, tribal, without Toksook Bay	16	77	106	175	220	236	246	240	301	387	373	355	251	178	103	62	22	13	1	1	3,363
	0.5%	2.3%	3.2%	5.2%	6.5%	7.0%	7.3%	7.1%	9.0%	11.5%	11.1%	10.6%	7.5%	5.3%	3.1%	1.8%	0.7%	0.4%	0.0%	0.0%	

Source SHARC database, Restricted Access Management Program, NMFS, Juneau, as of 12/31/2009

Table. 6—Estimated harvests of halibut in numbers of fish and pounds net (dressed, head-off) weight by regulatory area and subarea.

Subarea	Regulatory area	Number of SHARCs subsistence fished ^c	Estimated subsistence harvest by gear type ^a									Estimated sport harvest		
			Set hook gear			Hook and line or handline			All gear			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			
Southern Southeast Alaska	2C	1,724	1,442	9,748	199,192	790	3,835	62,853	1,724	13,583	262,046	895	3,012	46,811
Sitka Lamp Area	2C	827	750	3,848	79,861	284	645	9,951	827	4,493	89,812	281	711	10,058
Northern Southeast Alaska	2C	802	726	4,361	84,699	297	1,111	20,440	802	5,472	105,139	313	799	11,290
Subtotal, Area 2C		3,216	2,794	17,957	363,753	1,299	5,591	93,244	3,216	23,548	456,997	1,435	4,522	68,158
Yakutat Area	3A	79	62	632	10,595	29	205	3,795	79	837	14,390	35	254	3,611
Prince William Sound	3A	325	275	1,336	25,690	153	445	8,107	325	1,780	33,796	171	381	6,819
Cook Inlet	3A	278	149	2,010	36,115	212	2,844	44,927	278	4,854	81,043	155	728	11,625
Kodiak Island road system	3A	713	577	4,166	76,906	361	1,744	31,143	713	5,910	108,049	534	2,280	39,792
Kodiak Island—Other	3A	640	506	3,327	67,445	316	1,144	23,757	640	4,471	91,202	340	1,401	29,429
Subtotal, Area 3A		1,758	1,328	11,471	216,751	909	6,381	111,729	1,758	17,852	328,480	1,023	5,043	91,276
Chignik Area	3B	34	19	189	3,831	24	100	2,058	34	290	5,889	4	6	99
Lower Alaska Peninsula	3B	137	60	389	7,457	106	700	12,146	137	1,089	19,603	54	210	3,812
Subtotal, Area 3B		169	79	578	11,288	129	801	14,204	169	1,379	25,492	59	216	3,911
Eastern Aleutians—East	4A	87	61	899	21,400	60	556	11,689	87	1,455	33,090	47	121	1,790
Eastern Aleutians—West	4A	6	2	0	0	6	11	409	6	11	409	5	4	71
Subtotal, Area 4A		92	62	899	21,400	65	567	12,098	92	1,466	33,499	49	125	1,861
Western Aleutians—East	4B	12	8	12	336	10	65	839	12	77	1,175	6	0	0
Western Aleutians—Other	4B	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal, Area 4B		12	8	12	336	10	65	839	12	77	1,175	6	0	0
St. George Island	4C	5	3	13	263	3	30	438	5	43	700	0	0	0
St. Paul Island	4C	8	4	203	3,745	4	28	1,878	8	231	5,623	0	0	0
Subtotal, Area 4C		13	7	215	4,008	7	58	2,316	13	274	6,323	0	0	0
St. Lawrence Island	4D	7	5	19	339	2	7	306	7	26	644	0	0	0
Area 4D—Other	4D	0	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal, Area 4D		7	5	19	339	2	7	306	7	26	644	0	0	0
Bristol Bay	4E	8	8	0	0	8	0	0	8	0	0	7	0	0
Yukon Delta	4E	108	34	236	2,718	98	516	4,750	108	752	7,468	6	32	112
Norton Sound	4E	8	8	62	1,281	2	0	0	8	62	1,281	0	0	0
Kotzebue Sound	4E	5	0	0	0	5	0	0	5	0	0	0	0	0
Subtotal, Area 4E		128	51	298	3,999	113	516	4,750	128	813	8,749	12	32	112
Total, Alaska^c		5,296	4,255	31,450	621,873	2,479	13,984	239,486	5,296	45,434	861,359	2,528	9,938	165,318

Source ADF&G Division of Subsistence, SHARC survey, 2009.

- 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. Includes subsistence and sport fishing.

Table 7.—Alaska subsistence halibut harvests from 2003–2009 by geographic area fished.

Geographic area	Subsistence halibut harvests, net weight (lb)							Percent change between years		Percentage of state total						
	2003	2004	2005	2006	2007	2008	2009	2008 to 2009	6-year average to 2009	2003	2004	2005	2006	2007	2008	2009
	Southern Southeast Alaska	290,443	369,319	328,658	307,921	283,422	254,510	262,046	3.0%	-14.3%	27.9%	31.0%	27.9%	27.4%	27.5%	28.7%
Sitka LAMP Area	173,323	147,312	133,545	147,526	132,190	104,973	89,812	-14.4%	-35.8%	16.6%	12.3%	11.3%	13.1%	12.8%	11.8%	10.4%
Northern Southeast Alaska	159,772	160,453	135,869	124,670	109,286	98,877	105,139	6.3%	-20.0%	15.3%	13.4%	11.5%	11.1%	10.6%	11.1%	12.2%
Subtotal, Area 2C	623,538	677,084	598,072	580,117	524,897	458,360	456,997	-0.3%	-20.8%	59.9%	56.7%	50.8%	51.6%	50.8%	51.7%	53.1%
Yakutat Area	11,198	20,153	36,515	19,187	17,516	16,084	14,390	-10.5%	-28.4%	1.1%	1.7%	3.1%	1.7%	1.7%	1.8%	1.7%
Prince William Sound	28,409	58,429	68,063	47,965	52,407	47,112	33,796	-28.3%	-32.9%	2.7%	4.9%	5.8%	4.3%	5.1%	5.3%	3.9%
Cook Inlet	52,609	83,939	79,024	59,965	75,623	76,795	81,043	5.5%	13.6%	5.1%	7.0%	6.7%	5.3%	7.3%	8.7%	9.4%
Kodiak Island road system	114,028	129,145	134,849	140,388	130,538	96,872	108,049	11.5%	-13.1%	11.0%	10.8%	11.4%	12.5%	12.6%	10.9%	12.5%
Kodiak Island—Other	79,256	111,944	110,824	111,752	96,206	100,540	91,202	-9.3%	-10.4%	7.6%	9.4%	9.4%	9.9%	9.3%	11.3%	10.6%
Subtotal, Area 3A	285,500	403,610	429,275	379,258	372,289	337,403	328,480	-2.6%	-10.7%	27.4%	33.8%	36.4%	33.7%	36.1%	38.0%	38.1%
Chignik Area	10,500	12,053	14,783	17,780	15,397	11,842	5,889	-50.3%	-57.1%	1.0%	1.0%	1.3%	1.6%	1.5%	1.3%	0.7%
Lower Alaska Peninsula	16,977	21,467	31,442	30,767	32,351	30,406	19,603	-35.5%	-28.0%	1.6%	1.8%	2.7%	2.7%	3.1%	3.4%	2.3%
Subtotal, Area 3B	27,477	33,519	46,225	48,547	47,748	42,248	25,492	-39.7%	-37.8%	2.6%	2.8%	3.9%	4.3%	4.6%	4.8%	3.0%
Eastern Aleutians—East	19,345	26,715	33,882	25,993	12,753	19,043	33,090	73.8%	44.1%	1.9%	2.2%	2.9%	2.3%	1.2%	2.1%	3.8%
Eastern Aleutians—West	1,852	2,162	1,734	1,069	2,193	509	409	-19.7%	-74.2%	0.2%	0.2%	0.1%	0.1%	0.2%	0.1%	0.0%
Subtotal, Area 4A	21,197	28,877	35,615	27,062	14,946	19,553	33,499	71.3%	36.5%	2.0%	2.4%	3.0%	2.4%	1.4%	2.2%	3.9%
Western Aleutians—East	2,582	916	1,351	2,761	1,997	4,737	1,175	-75.2%	-50.8%	0.2%	0.1%	0.1%	0.2%	0.2%	0.5%	0.1%
Western Aleutians—Other	0	0	0	0	0	0	0			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subtotal, Area 4B	2,582	916	1,351	2,761	1,997	4,737	1,175	-75.2%	-50.8%	0.2%	0.1%	0.1%	0.2%	0.2%	0.5%	0.1%
St. George Island	2,042	1,823	2,145	3,443	3,736	1,150	700	-39.1%	-70.7%	0.2%	0.2%	0.2%	0.3%	0.4%	0.1%	0.1%
St. Paul Island	20,839	7,911	5,571	5,085	11,342	4,507	5,623	24.8%	-38.9%	2.0%	0.7%	0.5%	0.5%	1.1%	0.5%	0.7%
Subtotal, Area 4C	22,881	9,734	7,716	8,527	15,077	5,657	6,323	11.8%	-45.5%	2.2%	0.8%	0.7%	0.8%	1.5%	0.6%	0.7%
St. Lawrence Island	4,380	10,923	5,848	8,297	3,204	3,131	644	-79.4%	-89.2%	0.4%	0.9%	0.5%	0.7%	0.3%	0.4%	0.1%
Area 4D—Other	0	0	0	0	0	0	0			0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Subtotal, Area 4D	4,380	10,923	5,848	8,297	3,204	3,131	644	-79.4%	-89.2%	0.4%	0.9%	0.5%	0.7%	0.3%	0.4%	0.1%
Bristol Bay	435	203	2,169	1,336	2,116	84	0	-100.0%	-100.0%	0.0%	0.0%	0.2%	0.1%	0.2%	0.0%	0.0%
YK Delta	53,284	28,298	51,950	69,407	50,019	14,669	7,468	-49.1%	-83.3%	5.1%	2.4%	4.4%	6.2%	4.8%	1.7%	0.9%
Norton Sound	56	0	0	0	0	1,145	1,281	11.9%	540.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%
Subtotal, Area 4E	53,775	28,501	54,119	70,743	52,135	15,898	8,749	-45.0%	-80.9%	5.2%	2.4%	4.6%	6.3%	5.1%	1.8%	1.0%
Total, Alaska^a	1,041,330	1,193,162	1,178,222	1,125,312	1,032,293	886,988	861,359	-2.9%	-20.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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 8.—Number of hooks usually fished, setline (stationary) gear, Alaska halibut subsistence fishery, 2009.

Regulatory area (No. of SHARC holders)	Number of hooks ^b																														Missing	Total ^a	
	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			
2C (7,190)	No.	13	8	5	14	17	15	7	16	3	214	3	55	3	10	409	16	9	18	1	461	4	4	3	13	204	9	8	48	20	1,014	144	2,767
	Pct.	0.5	0.3	0.2	0.5	0.6	0.5	0.3	0.6	0.1	7.7	0.1	2.0	0.1	0.4	14.8	0.6	0.3	0.7	0.0	16.6	0.1	0.2	0.1	0.5	7.4	0.3	0.3	1.7	0.7	36.7	5.5	
3A (3,510)	No.	11	6	0	12	8	0	0	3	0	81	0	16	0	1	68	5	0	9	4	305	3	1	0	8	131	5	6	23	19	479	66	1,269
	Pct.	0.9	0.4	0.0	0.9	0.6	0.0	0.0	0.3	0.0	6.3	0.0	1.2	0.0	0.1	5.4	0.4	0.0	0.7	0.3	24.1	0.2	0.1	0.0	0.7	10.4	0.4	0.5	1.8	1.5	37.7	8.8	
3B (369)	No.	7	0	0	2	0	0	0	0	1	11	0	2	0	0	7	1	0	0	0	15	2	0	0	0	4	0	0	0	1	31	2	87
	Pct.	8.2	0.0	0.0	2.7	0.0	0.0	0.0	0.0	1.1	13.1	0.0	2.3	0.0	0.0	8.4	1.3	0.0	0.0	0.0	17.0	2.3	0.0	0.0	0.0	4.4	0.0	0.0	0.0	1.3	35.3	3.4	
4A (185)	No.	0	0	0	0	0	0	0	0	0	5	0	2	0	0	0	0	0	0	0	18	0	0	0	0	5	0	0	0	2	20	2	53
	Pct.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.9	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.9	0.0	0.0	0.0	0.0	10.2	0.0	0.0	0.0	2.8	37.4	3.6	
4B (33)	No.	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
	Pct.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	58.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4C (52)	No.	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	14	0	14
	Pct.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	
4D (20)	No.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	1	0	6
	Pct.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.2	0.0	0.0
4E (374)	No.	14	0	0	0	0	0	0	0	0	5	0	0	0	0	2	0	0	4	0	1	0	0	0	0	8	0	0	0	0	18	5	56
	Pct.	25.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0	0.0	0.0	3.2	0.0	0.0	6.7	0.0	1.8	0.0	0.0	0.0	0.0	14.8	0.0	0.0	0.0	0.0	31.1	6.1	
Alaska (11,733)	No.	46	13	5	28	25	15	7	20	4	318	3	74	3	11	486	22	9	31	5	805	8	6	3	21	353	14	14	71	41	1,576	219	4,255
	Pct.	1.1	0.3	0.1	0.6	0.6	0.3	0.2	0.5	0.1	7.5	0.1	1.7	0.1	0.3	11.4	0.5	0.2	0.7	0.1	18.9	0.2	0.1	0.1	0.5	8.3	0.3	0.3	1.7	1.0	37.0	5.1	

Source ADF&G Division of Subsistence, SHARC Survey, 2010.

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 9.—Average net weight of subsistence and sport harvested halibut, 2009, by regulatory area fished.

Area ^b	Subsistence methods			Sport harvest ^a			Total halibut		
	Number	Net weight (lb)	Average per fish	Number	Net weight (lb)	Average per fish	Number	Net weight (lb)	Average per fish
2C	23,548	456,997	19.4	4,522	68,158	15.1	28,070	525,155	18.7
3A	17,852	328,480	18.4	5,043	91,276	18.1	22,896	419,756	18.3
3B	1,379	25,492	18.5	216	3,911	18.1	1,595	29,402	18.4
4A	1,466	33,499	22.9	125	1,861	14.9	1,590	35,360	22.2
4B	77	1,175	15.4	0	0		77	1,175	15.4
4C	274	6,323	23.1	0	0		274	6,323	23.1
4D	26	644	24.9	0	0		26	644	24.9
4E	813	8,749	10.8	32	112	3.5	845	8,861	10.5
Alaska	45,434	861,359	19.0	9,938	165,318	16.6	55,373	1,026,677	18.5

Source ADF&G Division of Subsistence, SHARC Survey, 2010.

a. Sport harvest of halibut by SHARC holders.

b. Area totals are based on the location of the harvest (see also Table 6 and Table 7).

Table 10.—Estimated harvests of lingcod and rockfish by regulatory area and subarea.

Subarea	Regulatory area	Estimated number SHARCs fished	Lingcod		Rockfish	
			Estimated number respondents harvested	Estimated number lingcod harvested	Estimated number respondents harvested	Estimated number rockfish harvested
Northern Southeast Alaska	2C	802.2	78.5	220.0	181.7	1,110.7
Sitka Lamp Area	2C	826.6	366.0	1,036.8	419.6	3,155.9
Southern Southeast Alaska	2C	1,723.7	243.9	778.7	553.7	4,691.1
Subtotal, Area 2C		3,216.2	642.4	2,035.5	1,083.9	8,957.7
Cook Inlet	3A	278.5	33.9	149.5	43.7	613.6
Kodiak Island Other	3A	640.2	84.0	221.4	127.6	892.3
Kodiak Island Road System	3A	712.8	104.8	380.2	136.0	1,173.0
Prince William Sound	3A	324.7	45.2	85.2	82.3	404.7
Yakutat Area	3A	78.6	30.2	135.8	14.5	158.6
Subtotal, Area 3A		1,757.7	240.5	972.2	328.2	3,242.3
Chignik Area	3B	33.6	0.0	0.0	5.6	117.5
Lower Alaska Peninsula	3B	136.7	26.5	303.1	30.3	770.3
Subtotal, Area 3B		169.1	26.5	303.1	36.0	887.8
Eastern Aleutians - East	4A	86.7	8.1	37.3	15.6	148.2
Eastern Aleutians - West	4A	6.0	0.0	0.0	1.0	4.0
Subtotal, Area 4A		91.8	8.1	37.3	15.6	152.2
Western Aleutians - East	4B	12.0	4.5	3.0	7.6	24.4
Subtotal, Area 4B		12.0	4.5	3.0	7.6	24.4
St. George Island	4C	5.0	2.5	5.0	2.5	12.5
St. Paul Island	4C	7.8	0.0	0.0	0.0	0.0
Subtotal, Area 4C		12.8	2.5	5.0	2.5	12.5
St. Lawrence Island	4D	6.8	0.0	0.0	0.0	0.0
Subtotal, Area 4D		6.8	0.0	0.0	0.0	0.0
Bristol Bay	4E	8.3	0.0	0.0	0.0	0.0
Kotzebue Sound	4E	4.5	0.0	0.0	0.0	0.0
Norton Sound	4E	8.0	2.5	8.5	0.0	0.0
Yukon Delta	4E	107.6	3.7	25.6	3.7	38.1
Subtotal, Area 4E		128.4	6.2	34.1	3.7	38.1
Totals		5,296.4	899.8	3,390.1	1,427.4	13,315.0

Table 11.—Estimated harvests of halibut by gear type and participation subsistence and sport fisheries, selected Alaska communities, 2003 through 2009.

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

-continued-

Table 11.–Page 2 of 2.

Community ^a	Year	Number of SHARC holders ^b	Subsistence harvests						Sport harvest ^d		All harvests	
			Setline (fixed) gear		Hand-operated gear		Total subsistence harvest		Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested
			Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested	Estimated number fished	Estimated pounds harvested				
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
Toksook Bay	2003	532	8	3,790	47	20,709	54	24,500	0	0	54	24,500
	2004	529	7	859	44	5,737	56	6,596	0	0	56	6,596
	2005	522	5	602	60	14,269	61	14,870	2	98	62	14,968
	2006	533	6	2,333	112	34,149	113	36,481	0	0	113	36,481
	2007	533	17	1,451	100	6,469	112	7,921	0	0	112	7,921
	2008	34	6	707	8	1,436	9	2,143	0	0	9	2,143
	2009	33	3	266	10	789	10	1,055	0	0	10	1,055
Tununak	2003	0										
	2004	70	16	878	23	1,076	31	1,954	0	0	31	1,954
	2005	70	3	332	18	2,329	20	2,661	0	0	20	2,661
	2006	70	7	224	33	3,808	33	4,032	0	0	33	4,032
	2007	69	14	1,536	38	5,479	38	7,015	0	0	38	7,015
	2008	68	0	0	8	1,296	8	1,296	0	0	8	1,296
Unalaska ^c	2003	11	0	0	7	488	7	488	0	0	7	488
	2004	92	39	6,713	31	4,146	50	10,860	33	5,519	70	16,379
	2005	131	43	9,557	39	5,973	81	15,530	34	2,165	93	17,695
	2006	150	60	9,573	57	8,535	88	18,108	28	2,439	97	20,547
	2007	171	53	7,526	47	8,805	81	16,331	50	3,768	101	20,100
	2008	176	67	9,012	38	4,238	83	13,250	33	2,287	92	15,537
	2009	173	59	7,293	42	6,417	87	13,710	43	2,962	101	16,672
	2009	164	56	19,204	54	10,102	76	29,306	45	1,861	98	31,167

Source ADF&G Division of Subsistence, SHARC Surveys, 2004–2010.

a. For data on all communities for 2009, see Appendix tables E-4, E-5, and E-6.

b. SHARC = Subsistence halibut registration certificate; includes all SHARC holders living in the community.

c. Includes Dutch Harbor.

d. Sport harvests by SHARC holders only.

Table 12.—Estimated harvests of halibut for home use, Sitka.

Year	Number of fishing households	Pounds usable (net) weight				Total without commercial removal	95% confidence range (±%) ^b
		Removed from commercial harvests	Rod and reel	Other methods ^a	Total		
1987	1,252	12,353	180,982		193,335	180,982	22
1996	943	16,528	135,048	14,196	165,772	149,244	28
Annual average	1,098	14,441	158,015	14,196	179,554	165,113	

Source Scott et al. 2001.

- a. Harvest data not collected for "other methods" in 1987.
- b. Pertains to estimate of total harvests.

Table 13.—Number of SHARCs issued, estimated number of subsistence halibut fishers, and estimated harvests by SHARC category, Sitka, 2003–2009.

Year	Rural SHARCs				Tribal SHARCs				All SHARC holders residing in Sitka			
	Subsistence		Harvest	Average harvest per fisher (lb)	Subsistence		Harvest	Average harvest per fisher (lb)	Subsistence		Harvest	Average harvest per fisher (lb)
	SHARCs	fished			SHARCs	fished			SHARCs	fished		
2003	1,224	679	128,489	189	415	142	46,391	327	1,639	821	174,880	213
2004	1,464	785	135,532	173	407	119	30,942	260	1,871	904	166,474	184
2005	1,578	654	114,632	175	396	160	31,687	198	1,974	814	146,319	180
2006	1,429	759	120,735	159	466	156	42,637	274	1,895	915	163,372	179
2007	1,484	754	104,530	139	470	167	37,519	225	1,954	921	142,049	154
2008	1,388	722	87,945	122	274	123	21,636	176	1,662	845	109,581	130
2009	1,446	717	82,246	115	285	127	15,178	120	1,731	844	97,424	115
Historical average (2003–2008)	1,428	726	115,311	159	405	144	35,135	243	1,833	870	150,446	173

Table 14.—Estimated harvests of halibut for home use, Petersburg.

Year	Number of fishing households	Pounds usable (net) weight				Total without commercial removal	95% confidence range (±%) ^b
		Removed from commercial harvests	Rod and reel	Other methods ^a	Total		
1987	604	11,728	107,448		119,176	107,448	51
2000	468	6,951	49,023	0	55,974	49,023	39
Annual average	536	9,339	78,236	0	87,575	78,236	

Source Scott et al. 2001; ADF&G Division of Subsistence, Household Survey, 2001.

- a. Harvest data not collected for "other methods" in 1987.
- b. Pertains to estimate of total harvests.

Table 15.—Estimated harvests of halibut for home use, Cordova.

Year	Number of fishing households	Pounds usable (net) weight				Total	Total without commercial removal	95% confidence range (±%) ^a
		Removed from commercial harvests	Rod and reel	Other methods				
1985	228	3,776	31,002	1,752	36,530	32,754	29%	
1988	343	18,701	119,873	348	138,922	120,221	62%	
1991	272	25,107	25,493	116	50,716	25,609	33%	
1992	401	11,383	60,612	0	71,995	60,612	48%	
1993	382	3,762	39,556	2,056	45,374	41,612	32%	
1997	321	3,551	58,647	4,252	66,450	62,899	41%	
Annual average	325	11,047	55,864	1,421	68,331	57,285		

Source Scott et al. 2001.

a. Pertains to estimate of total harvests.

Table 16.—Estimated harvests of halibut for home use, Port Graham.

Year	Number of fishing households	pounds usable (net) weight				Total	Total without commercial removal	95% confidence range (±%) ^b
		Removed from commercial harvests	Rod and reel	Other methods				
1987	42	1,237	3,809	3,389	8,435	7,198	14%	
1989	29	3,217	1,482	1,222	5,921	2,704	47%	
1990	32	3,003	4,106	3,171	10,280	7,277	22%	
1991	35	1,663	2,332	4,846	8,841	7,178	17%	
1992	42	24	7,867	3,365	11,256	11,232	14%	
1993	42	86	3,105	1,346	4,537	4,451	14%	
1997	36	79	2,881	5,326	8,286	8,207	28%	
Annual average ^a	38	1,015	4,017	3,574	8,606	7,591		

Source Scott et al. 2001.

a. Excludes 1989, the year of the *Exxon Valdez Oil Spill*.

b. Pertains to estimate of total harvests.

Table 17.—Estimated harvests of halibut for home use, Kodiak road system.^a

Year	Number of fishing households	Pounds usable (net) weight				Total	Total without commercial removal	95% confidence range (±%) ^b
		Removed from commercial harvests	Rod and reel	Other methods				
1982	1,404	NA	NA	NA	451,223	360,113	45%	
1991	1,178	48,245	206,692	40,591	295,528	247,283	30%	
1992	1,178	89,625	329,345	18,732	437,702	348,077	33%	
1993	1,336	142,108	479,391	31,863	653,362	511,254	33%	
Annual average	1,306	93,326	338,476	30,395	462,197	366,682		

Source Scott et al. 2001.

a. Harvest data are available based on random samples drawn from the entire road system population for 1982 and 1991. Only Kodiak City was sampled in 1992 and 1993. Estimates for the entire road system population were developed for this table based on the known portion of the total road system harvest harvested by city residents in 1982 and 1991.

b. Pertains to estimate of total harvests.

Table 18.—Halibut removals in Alaska by regulatory area, 2009.

Area	Pounds net weight					
	Commercial ^a	Sport ^b	Subsistence ^c	Wastage	Bycatch	Total
2C	4,866,089	2,546,000	456,997	272,000	350,000	8,491,086
3A	21,399,356	4,531,000	328,480	1,162,000	2,990,000	30,410,836
3B	10,616,165	25,000	25,492	795,000	1,350,000	12,811,657
4	7,277,154	39,000	61,650	259,000	11,380,000	19,016,804
Alaska	44,158,764	7,141,000	872,618	2,488,000	16,070,000	70,730,382

Sources Williams 2010; Division of Subsistence, ADF&G, SHARC Survey, 2010; IPHC and Geiger 2010:73.

- a. Commercial catch includes IPHC research catch and in Area 2C, the Metlakatla fishery catch.
- b. Projected harvests.
- c. Includes 11,259 lb of U32 (under 32 inches in length) halibut legally retained by CDQ organizations in areas 4D and 4E for personal use. The subsistence harvest by SHARC holders was 861,359 lb, including 50,391 lb in Area 4.

Table 19.—Comparison of selected SHARC survey results, 2003–2009.

	Study years							Percent change	
	2003	2004	2005	2006	2007	2008	2009	2009 compared to 2008	2009 compared to previous 6-year average
Response to survey									
Number of SHARCs issued	11,635	13,813	14,306	14,206	15,047	11,565	11,733	1.5%	-12.6%
Number of surveys returned	7,593	8,524	8,565	8,426	8,682	7,316	6,944	-5.1%	-15.2%
Response rate	65.3%	61.7%	59.9%	59.3%	57.7%	63.3%	59.2%	-6.4%	-3.3%
Subsistence halibut fishing									
Estimated number of subsistence halibut fishers	4,942	5,984	5,621	5,909	5,933	5,303	5,296	-0.1%	-5.7%
Percent of all SHARC holders subsistence fishing	42.5%	43.3%	39.3%	41.6%	39.4%	45.9%	45.1%	-1.5%	7.5%
Estimated number of subsistence halibut	43,926	52,412	55,875	54,089	53,697	48,604	45,434	-6.5%	-11.7%
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	-2.9%	-20.0%
Average weight of subsistence-harvested halibut	23.7	22.8	21.1	20.8	19.2	18.2	19.0	3.9%	-9.6%
Average harvest per fisher, fish	8.9	8.8	9.9	9.2	9.1	9.2	8.6	-6.4%	-6.3%
Average harvest per fisher, net pounds	210.7	199.4	209.6	190.4	174.0	167.3	162.6	-2.8%	-15.3%
Sport halibut fishing by SHARC holders									
Estimated number of sport halibut fishers	2,580	3,107	3,147	2,894	2,566	2,609	2,528	-3.1%	-10.3%
Percent of all SHARC holders sport fishing	22.2%	22.5%	22.0%	20.4%	17.1%	22.6%	21.5%	-4.5%	2.1%
Estimated number of sport halibut	10,784	12,530	14,096	11,219	10,959	11,427	9,938	-13.0%	-16.0%
Estimated net pounds of sport halibut	245,947	251,092	293,415	223,639	196,198	197,760	165,318	-16.4%	-29.6%
Average weight of sport-harvested halibut	22.8	20.0	20.8	19.9	17.9	17.3	16.6	-3.9%	-16.0%
Average harvest per fisher, fish	4.2	4.0	4.5	3.9	4.3	4.4	3.9	-10.2%	-6.5%
Average harvest per fisher, net pounds	95.3	80.8	93.2	77.3	76.5	75.8	65.4	-13.7%	-21.3%
Total number of halibut fishers									
Estimated number of fishers, subsistence or sport	5,941	6,980	6,876	6,899	6,787	6,202	6,153	-0.8%	-7.0%
Percent of total SHARC holders who fished	51.1%	50.5%	48.1%	48.6%	45.1%	53.6%	52.4%	-2.2%	6.0%
Incidental rockfish harvests									
Number of rockfish harvesters	1,239	1,616	1,544	1,529	1,568	1,404	1,427	1.7%	-3.8%
Percent of all SHARC holders	10.6%	11.7%	10.8%	10.8%	10.4%	12.1%	12.2%	0.2%	9.8%
Percent of all subsistence halibut fishers	25.1%	27.0%	27.5%	25.9%	26.4%	26.5%	27.0%	1.8%	2.1%
Number of rockfish harvested	14,870	19,001	12,395	16,945	15,266	14,346	13,315	-7.2%	-13.9%
Average number of rockfish harvested, all subsistence halibut fishers	3.0	3.2	2.2	2.9	2.6	2.7	2.5	-7.1%	-8.8%
Average number of rockfish harvested, subsistence halibut fishers who harvested rockfish	12.0	11.8	8.0	11.1	9.7	10.2	9.3	-8.7%	-10.9%
Incidental lingcod harvests									
Number of lingcod harvesters	699	953	862	927	959	854	900	5.3%	2.7%
Percent of all SHARC holders	6.0%	6.9%	6.0%	6.5%	6.4%	7.4%	7.7%	3.8%	17.3%
Percent of all subsistence halibut fishers	14.1%	15.9%	15.3%	15.7%	16.2%	16.1%	17.0%	5.4%	9.2%
Number of lingcod harvested	3,298	4,407	2,355	3,486	3,402	3,479	3,390	-2.6%	-0.4%
Average number of lingcod harvested, all subsistence halibut fishers	0.7	0.7	0.4	0.6	0.6	0.7	0.6	-2.5%	5.4%
Average number of lingcod harvested, subsistence halibut fishers who harvested lingcod	4.7	4.6	2.7	3.8	3.5	4.1	3.8	-7.5%	-3.6%

Sources Fall et al. 2004, 2005, 2006, 2007; Fall and Koster 2008, 2009; ADF&G Division of Subsistence, SHARC Survey, 2010.

Table 20.—Percentage of SHARCs that expired by SHARC type.

	Percentage of SHARCs					
	Tribal		Rural		All	
	Expired	Active	Expired	Active	Expired	Active
Never responded to harvest survey	29.0%	18.4%	25.0%	12.4%	27.1%	14.5%
Never subsistence fished for halibut	40.8%	21.3%	24.9%	8.1%	32.9%	12.6%
Never harvested halibut	5.3%	10.4%	8.3%	12.2%	6.8%	11.6%
Harvest: low (1 to 100 lb)	11.7%	22.4%	19.0%	28.0%	15.3%	26.1%
Harvest: medium (101 to 1,000 lb)	12.4%	25.6%	22.1%	38.2%	17.2%	33.9%
Harvest: high (>1,000 lb)	0.8%	1.8%	0.8%	1.1%	0.8%	1.3%
All harvesters (any amount)	24.9%	49.8%	41.9%	67.3%	33.3%	61.3%
All fishers (includes never harvested)	30.2%	60.2%	50.2%	79.5%	40.1%	72.9%

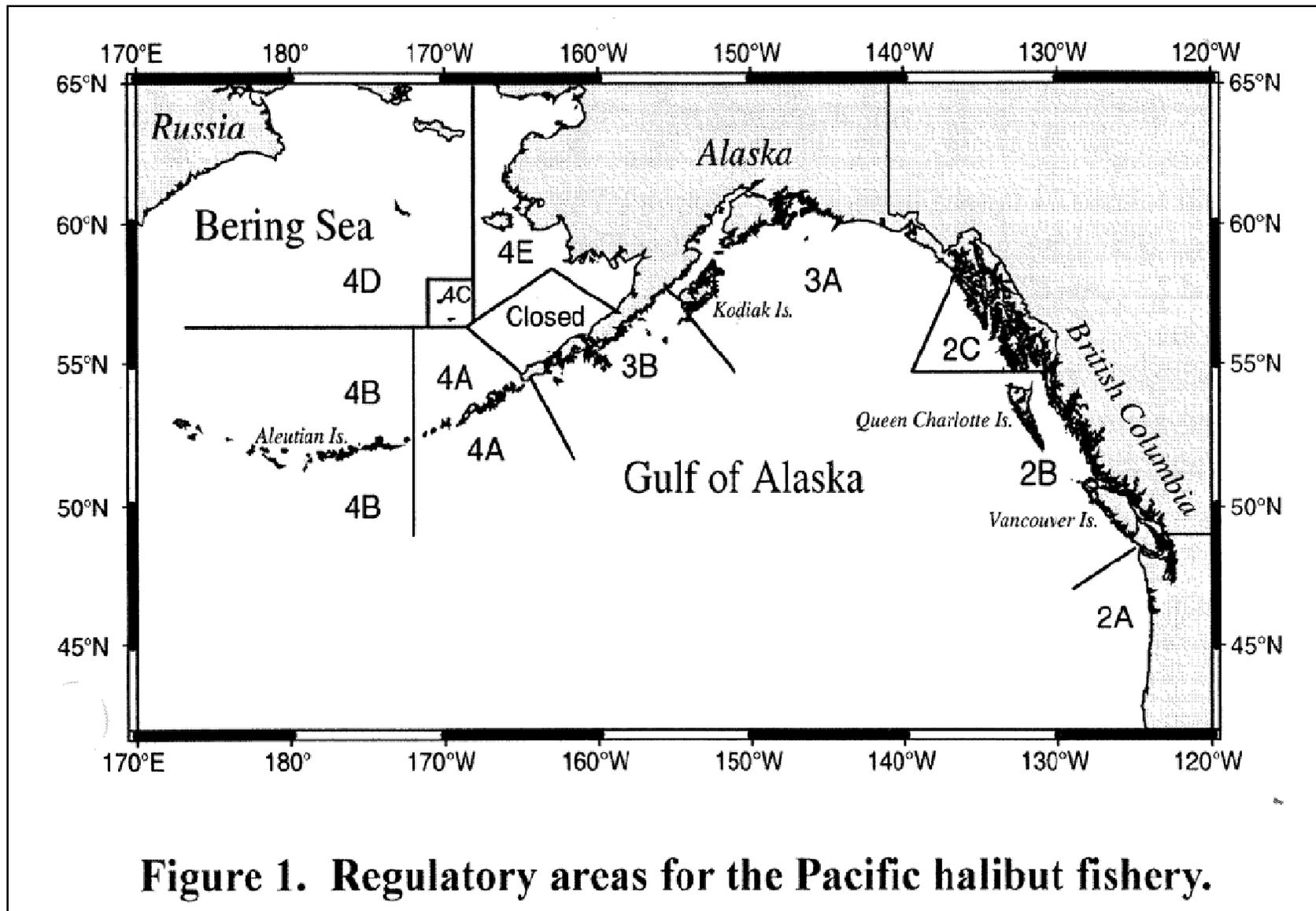


Figure 1.—Regulatory areas for the Pacific halibut fishery.

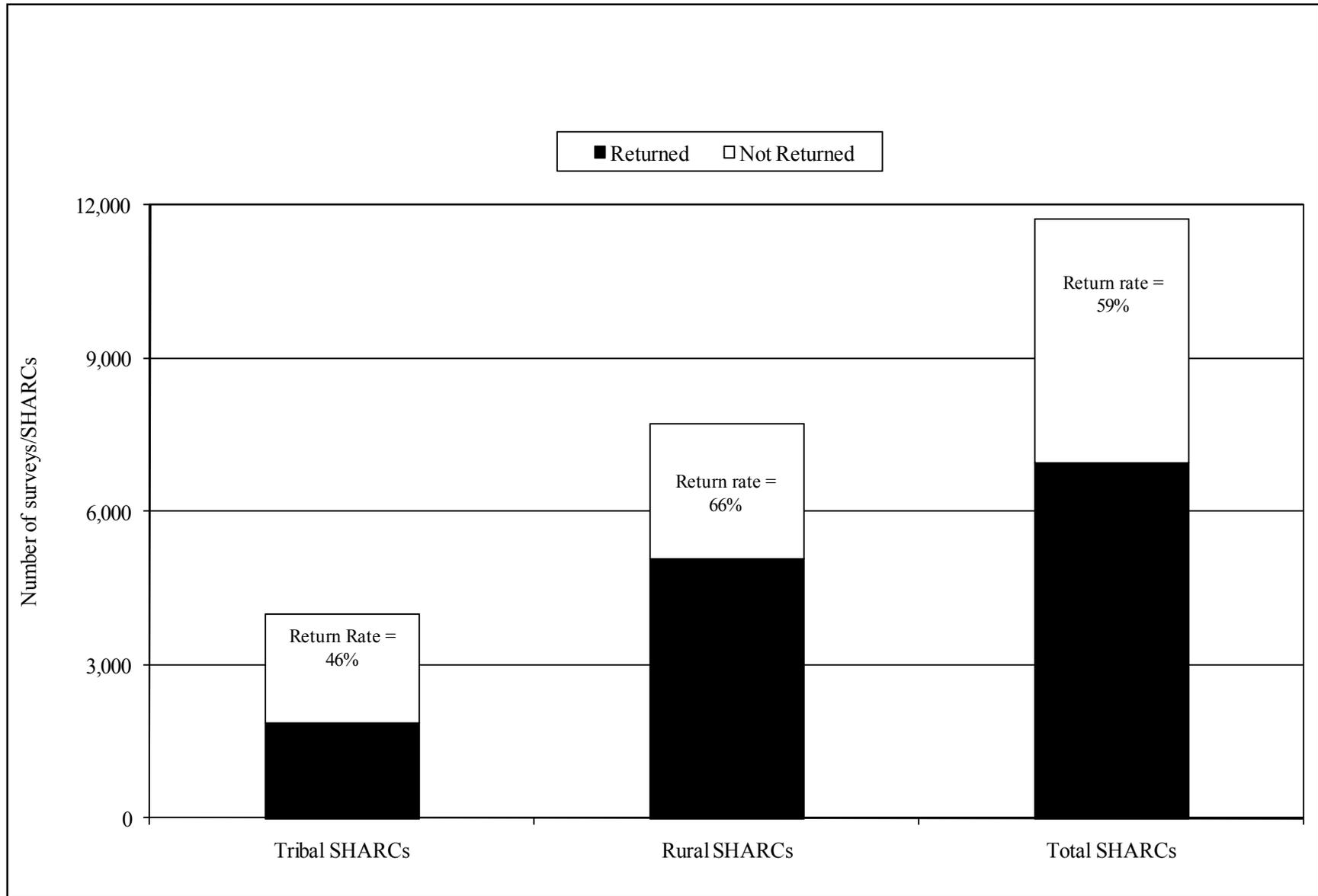


Figure 2.—Number of surveys returned and return rates for subsistence halibut surveys, by SHARC type, 2008.

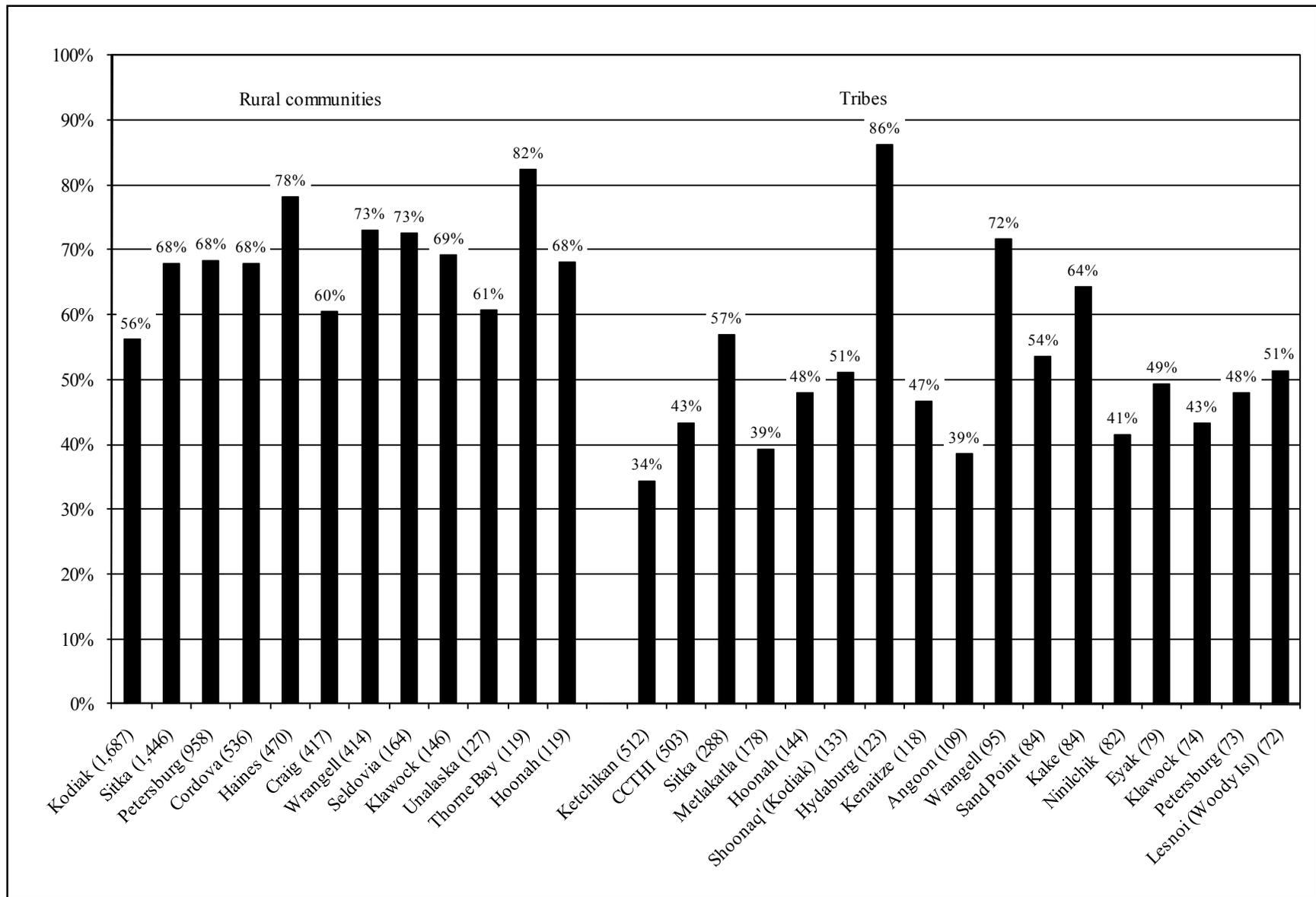


Figure 3.– SHARC survey return rates, communities with more than 100 SHARCs issued and tribes with more than 70 SHARCs issued, 2009.

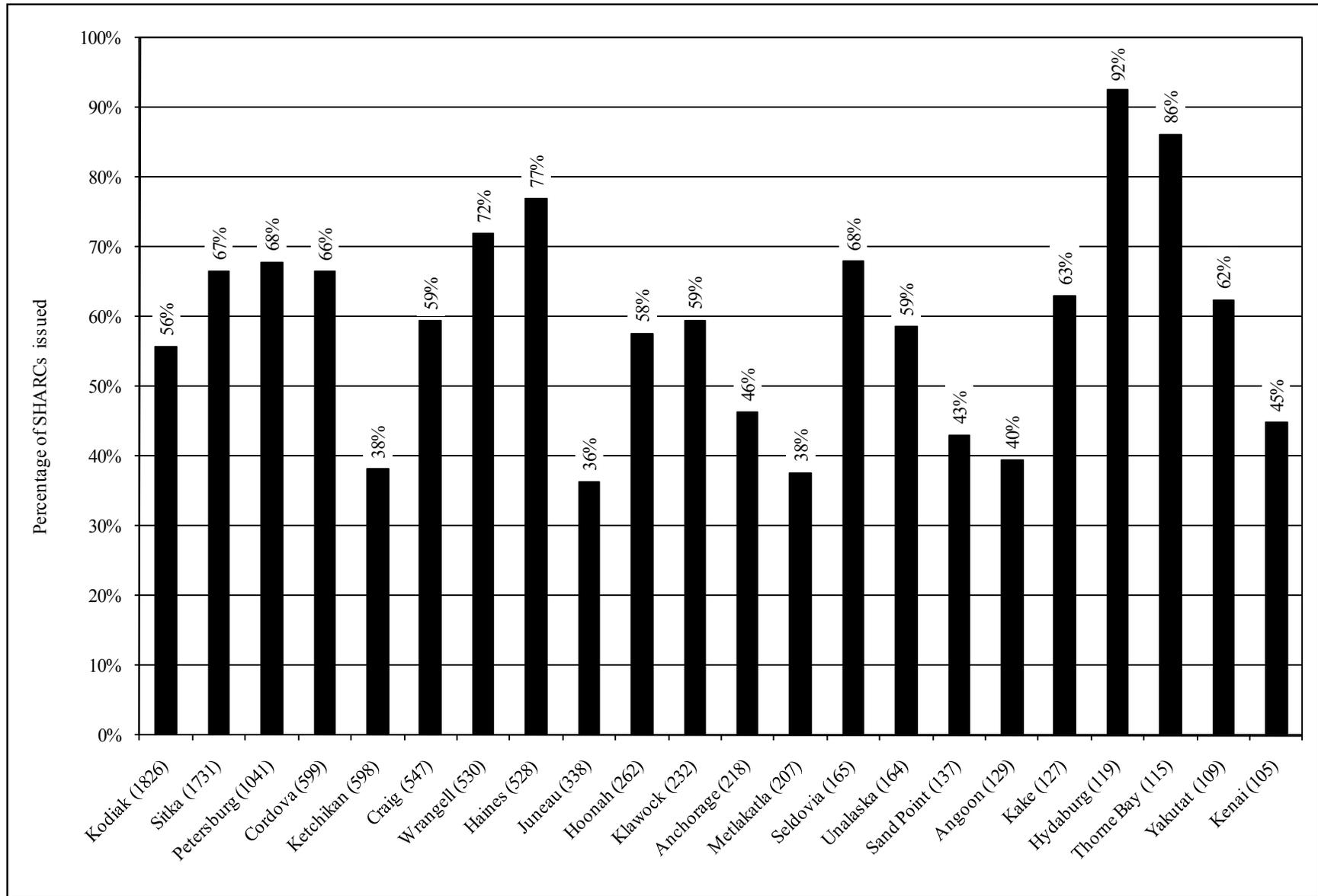


Figure 4.—Return rate by place of residence 2009.

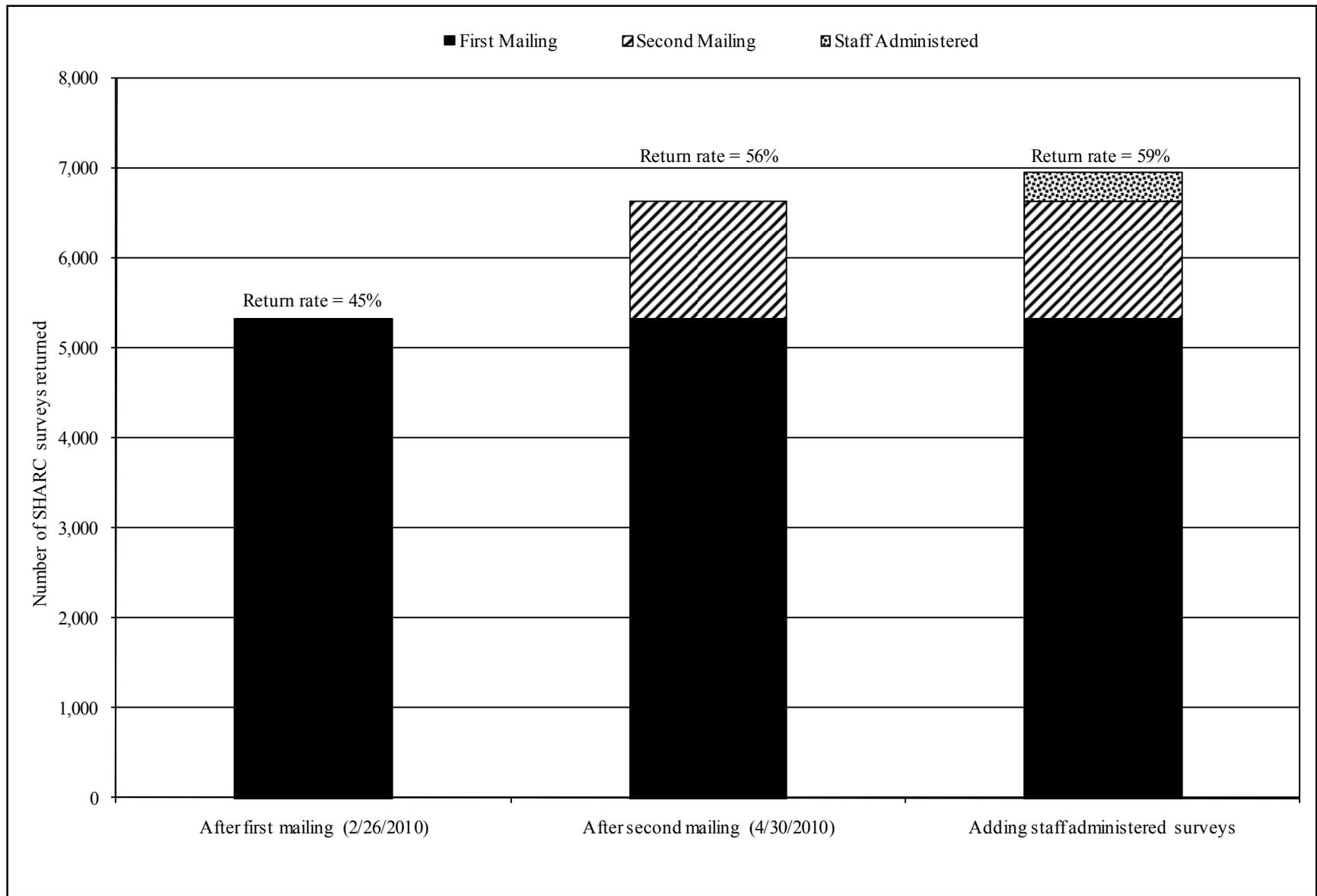


Figure 5.—Number of survey responses by response category, 2009.

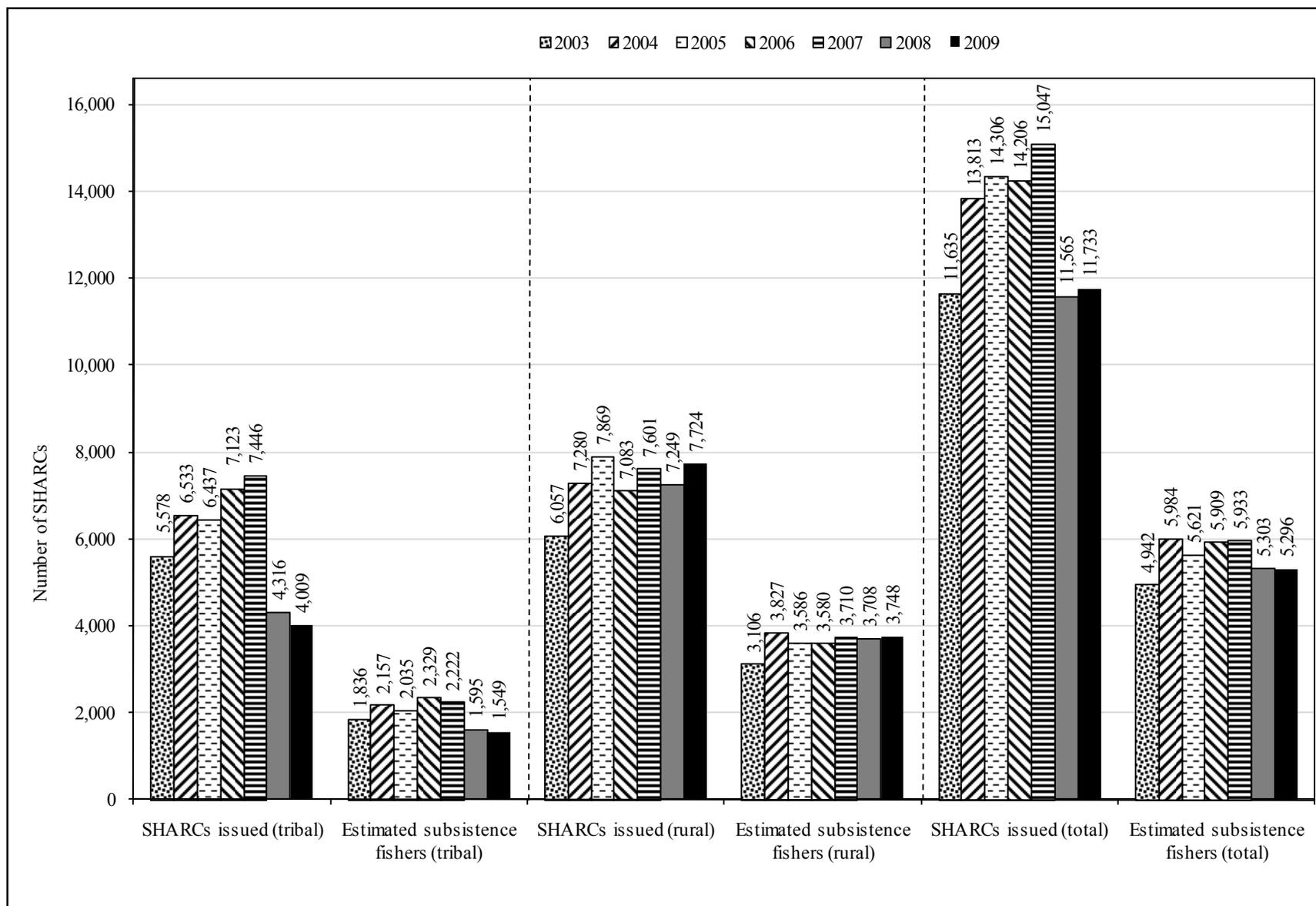


Figure 6.—Number of SHARCs issued and estimated number of subsistence halibut fishers by SHARC type, 2003–2009.

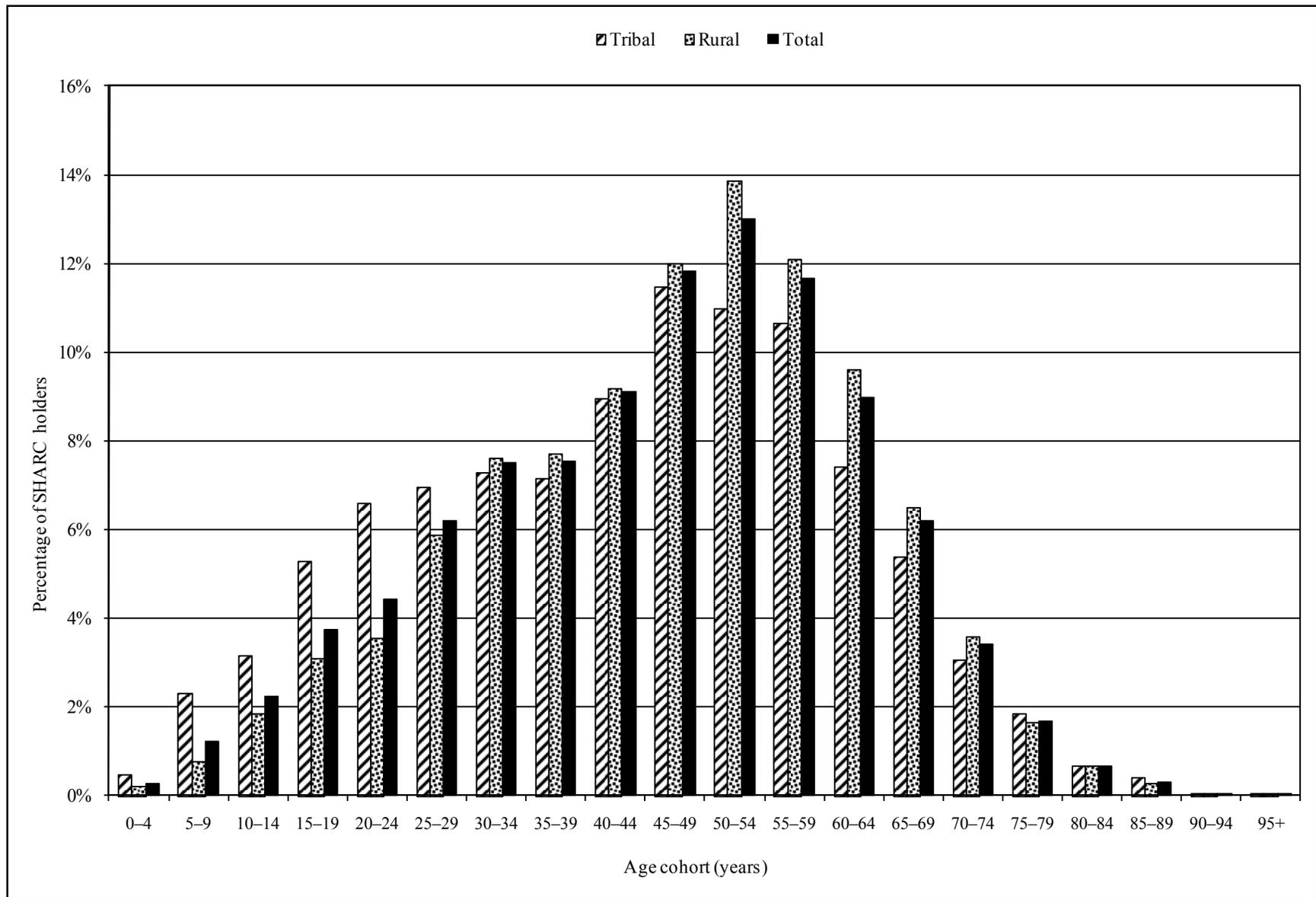


Figure 7.—Age of subsistence halibut registration certificate holders by SHARC type, 2009.

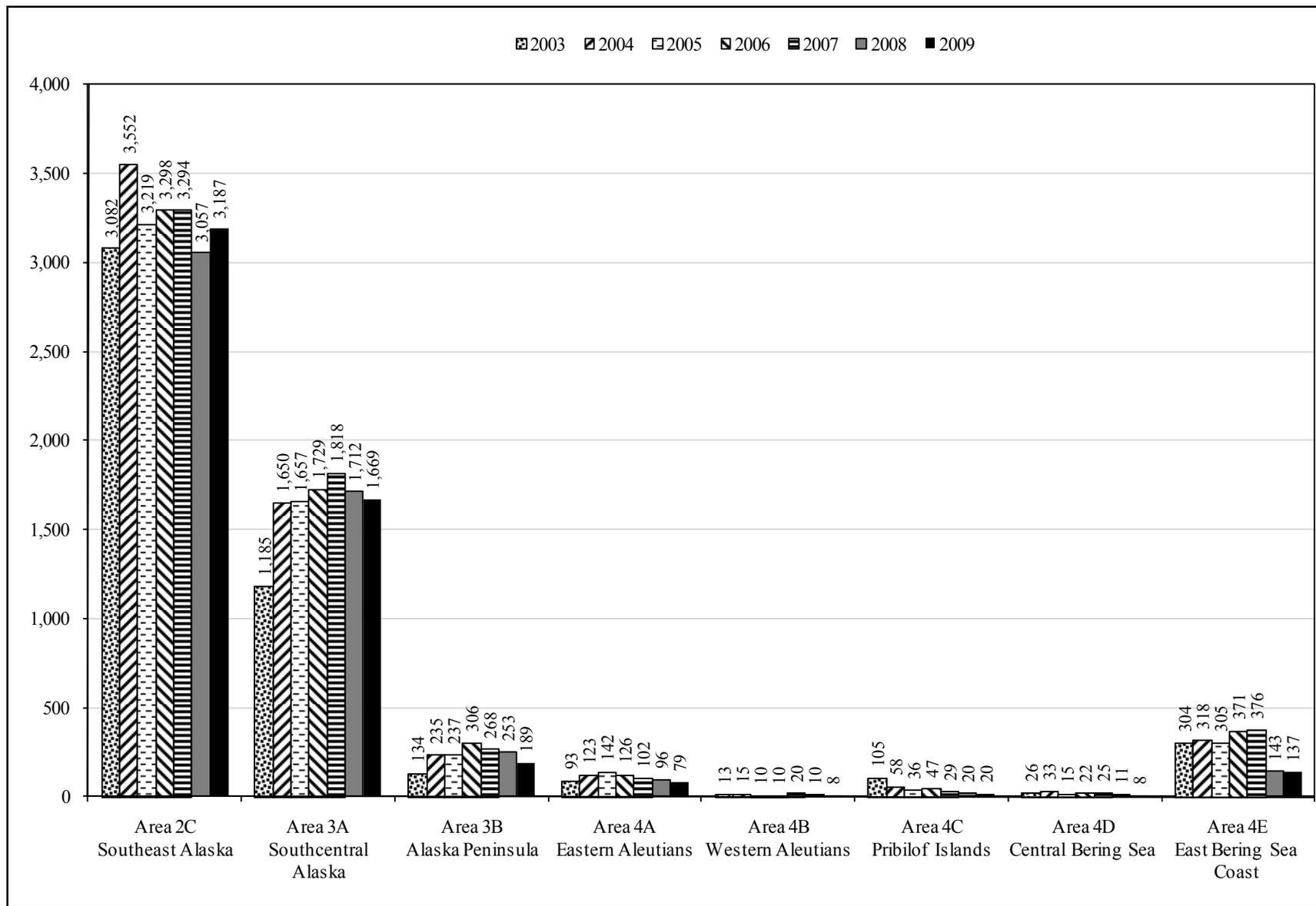


Figure 8.—Estimated number of Alaska subsistence halibut fishers, 2003–2009 by regulatory area of tribe or rural community.

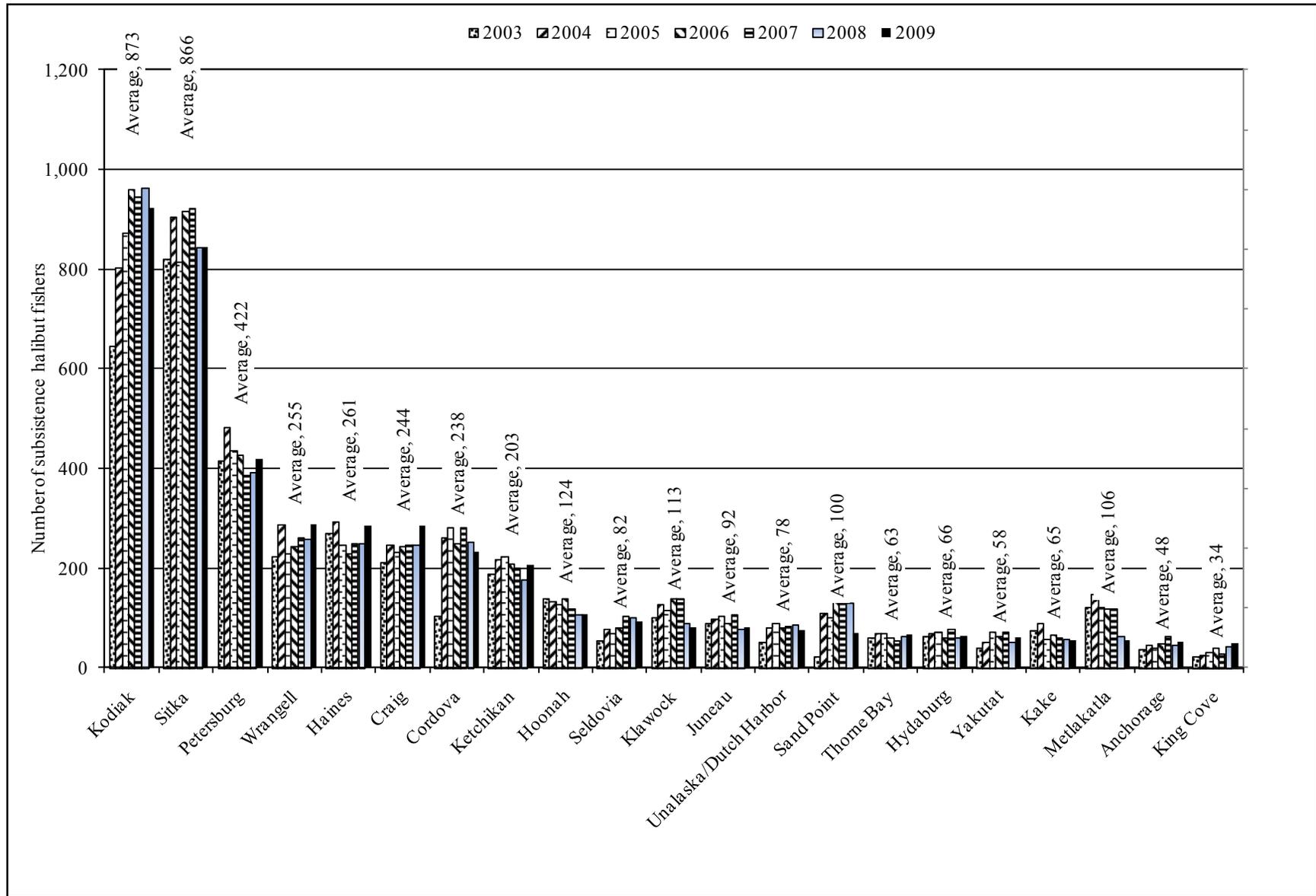


Figure 9.—Estimated number of subsistence halibut fishers by place of residence, 2003–2009, communities with 50 or more fishers in 2009.

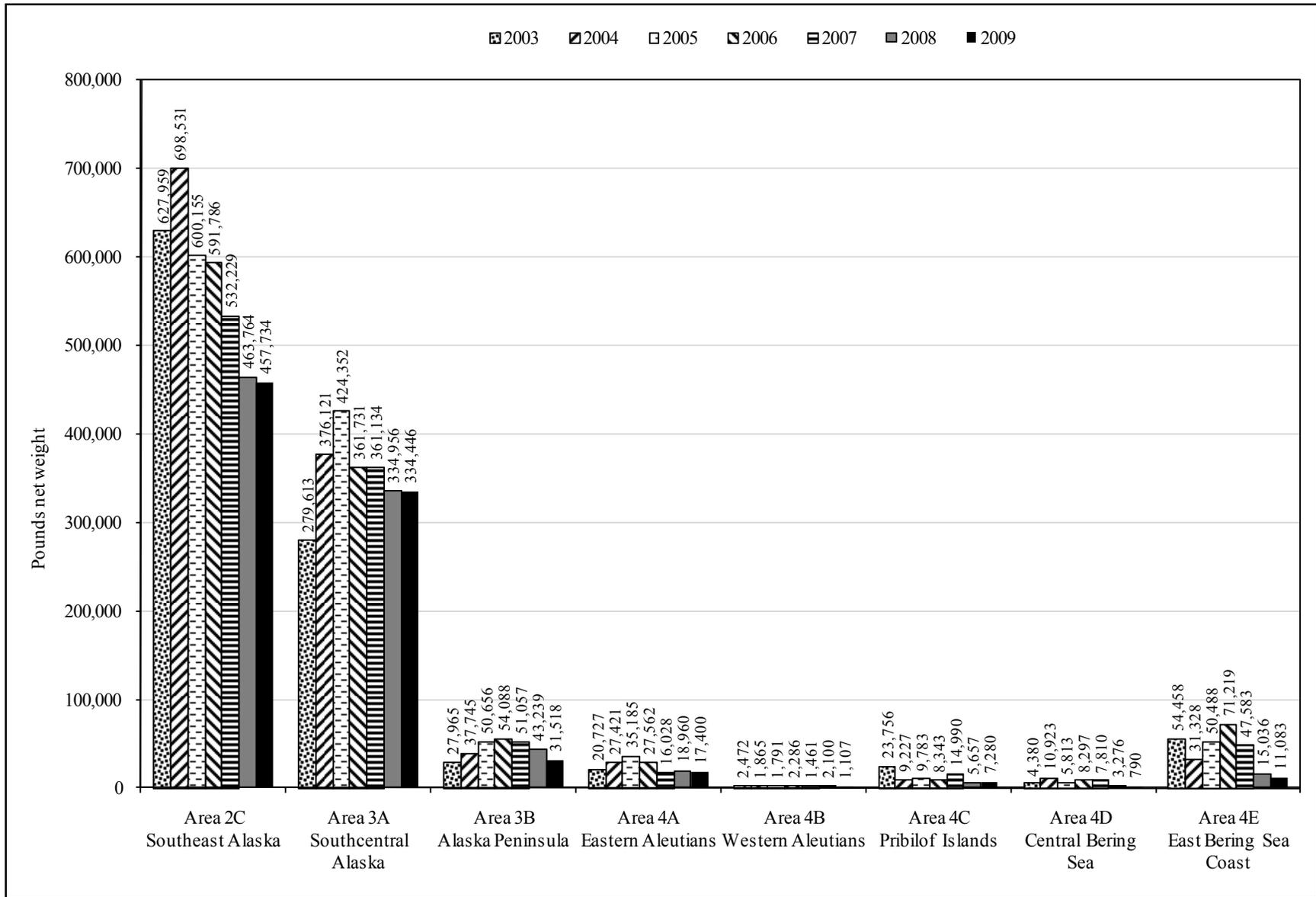


Figure 10.—Estimated subsistence halibut harvests, pounds net weight, by regulatory area of tribe and rural community, 2003–2009.

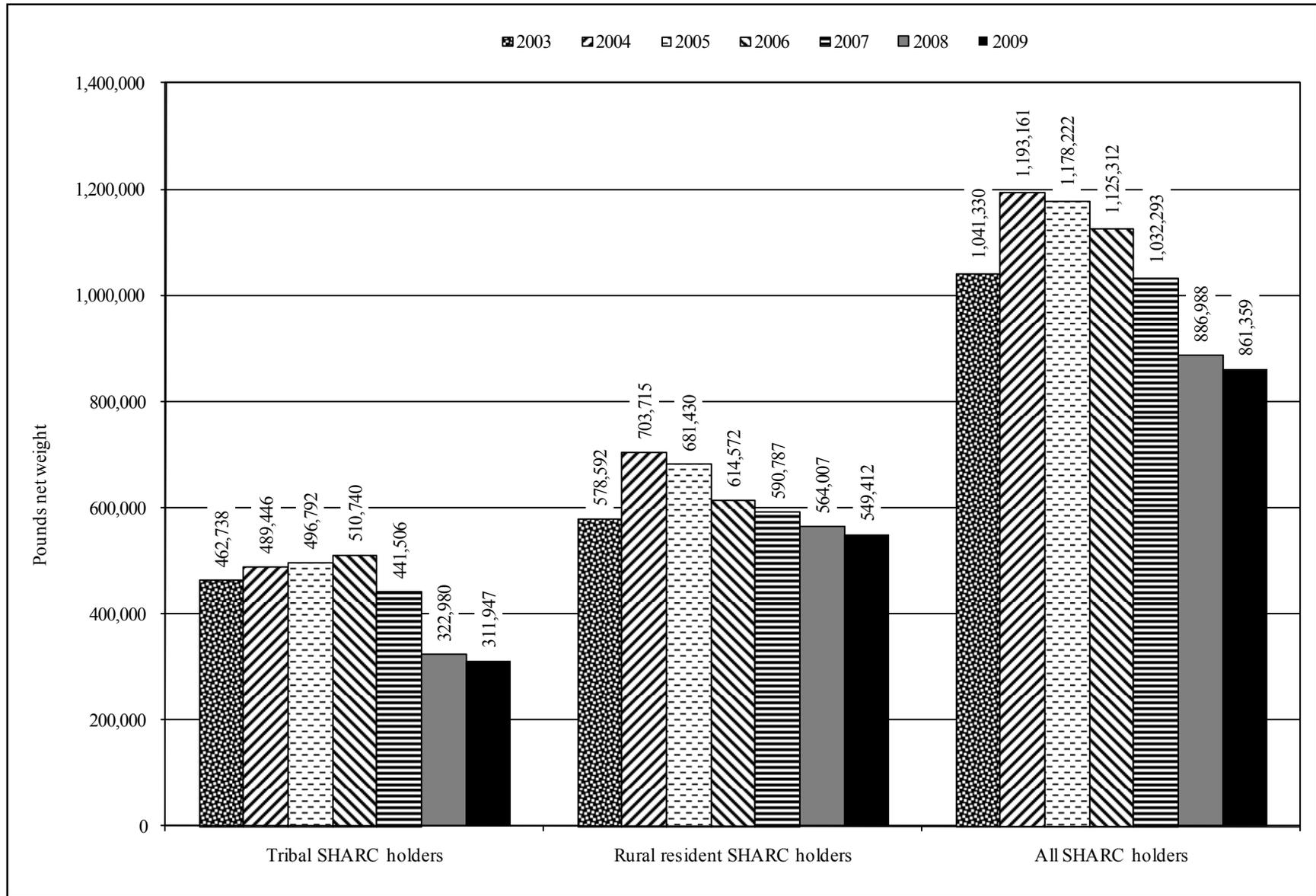


Figure 11.—Estimated Alaska subsistence halibut harvests in pounds net weight by SHARC type, 2003–2009.

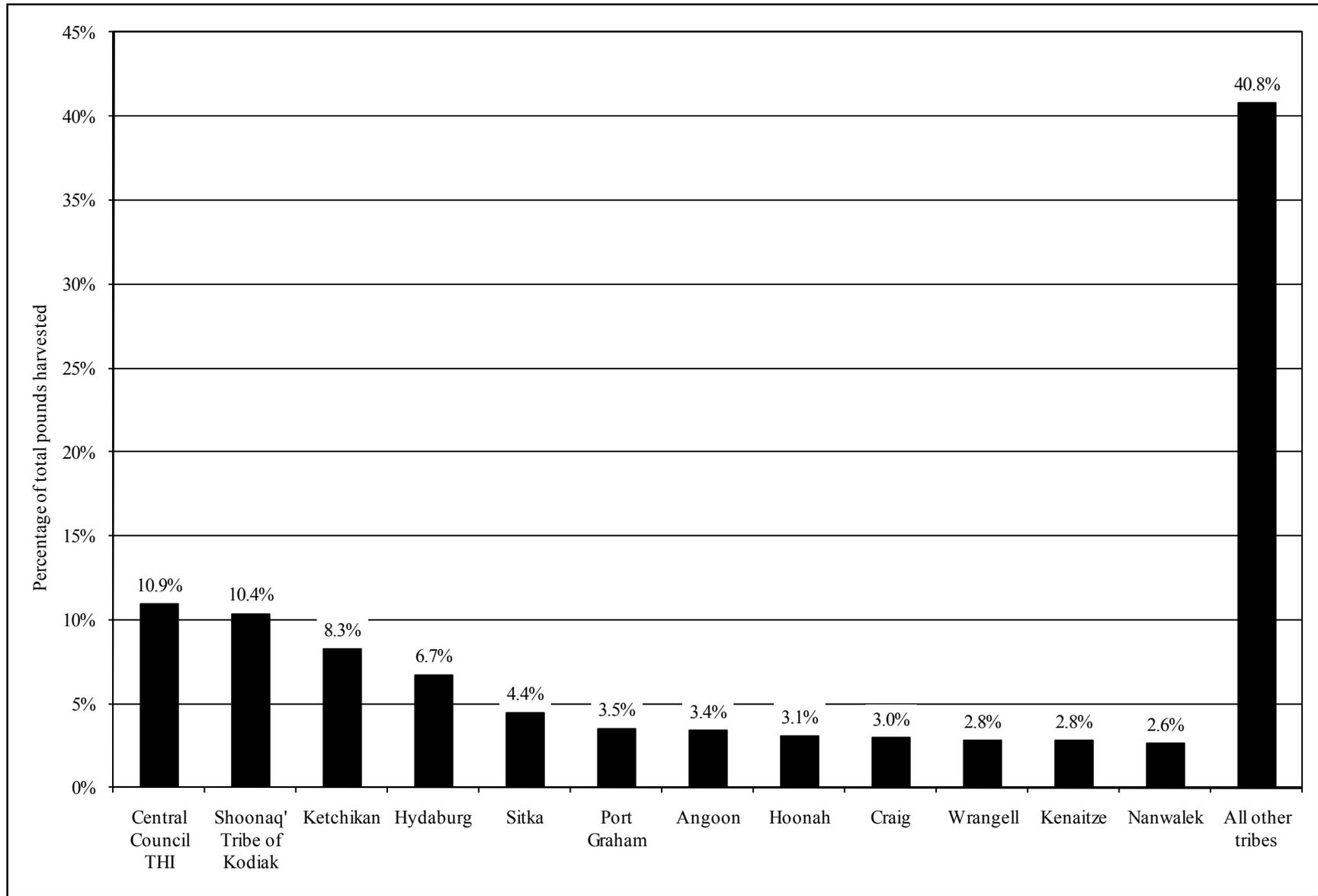


Figure 12.—Percentage of tribal subsistence halibut harvest by tribe, 2009.

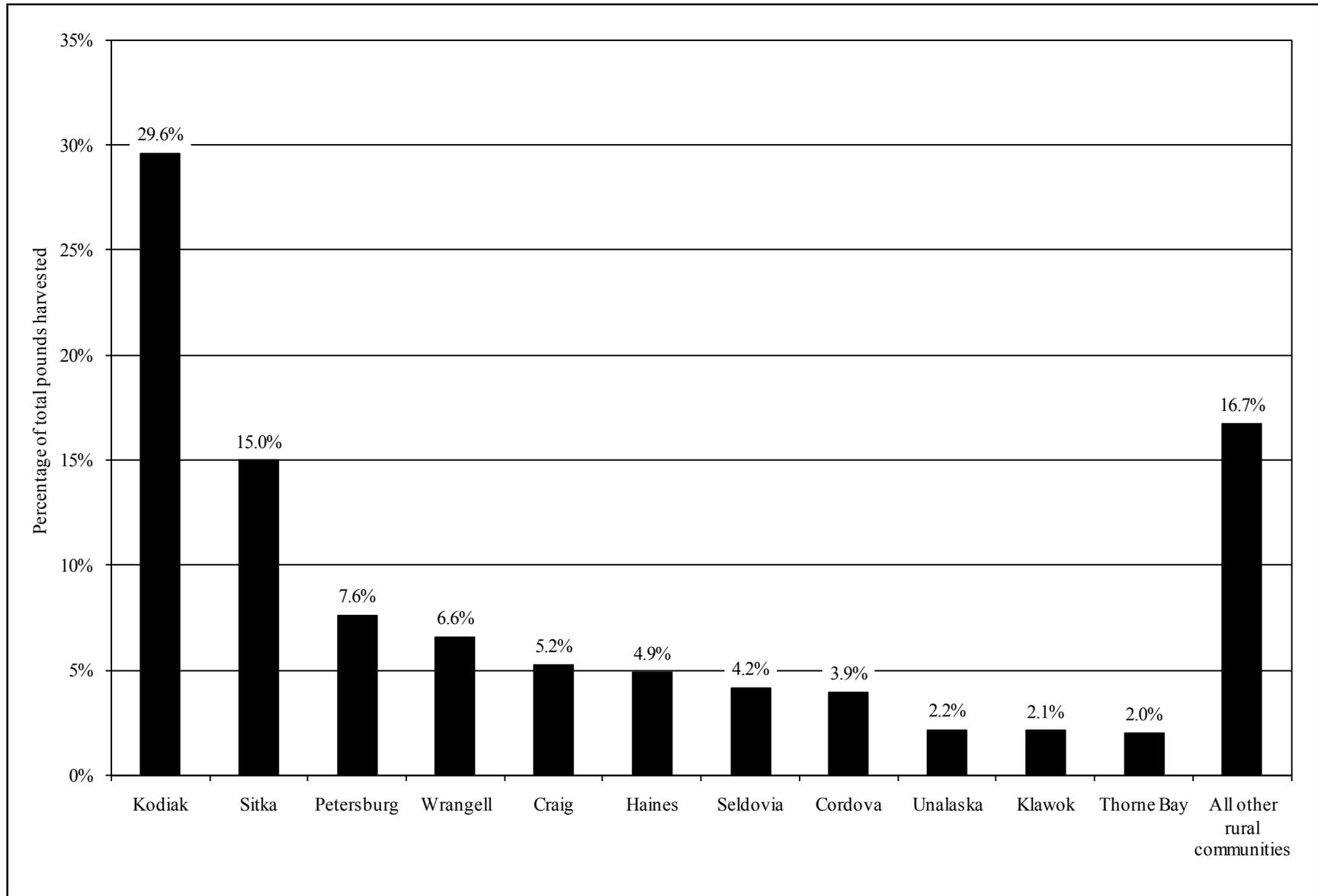


Figure 13.—Percentage of rural community subsistence halibut harvest by community, 2009.

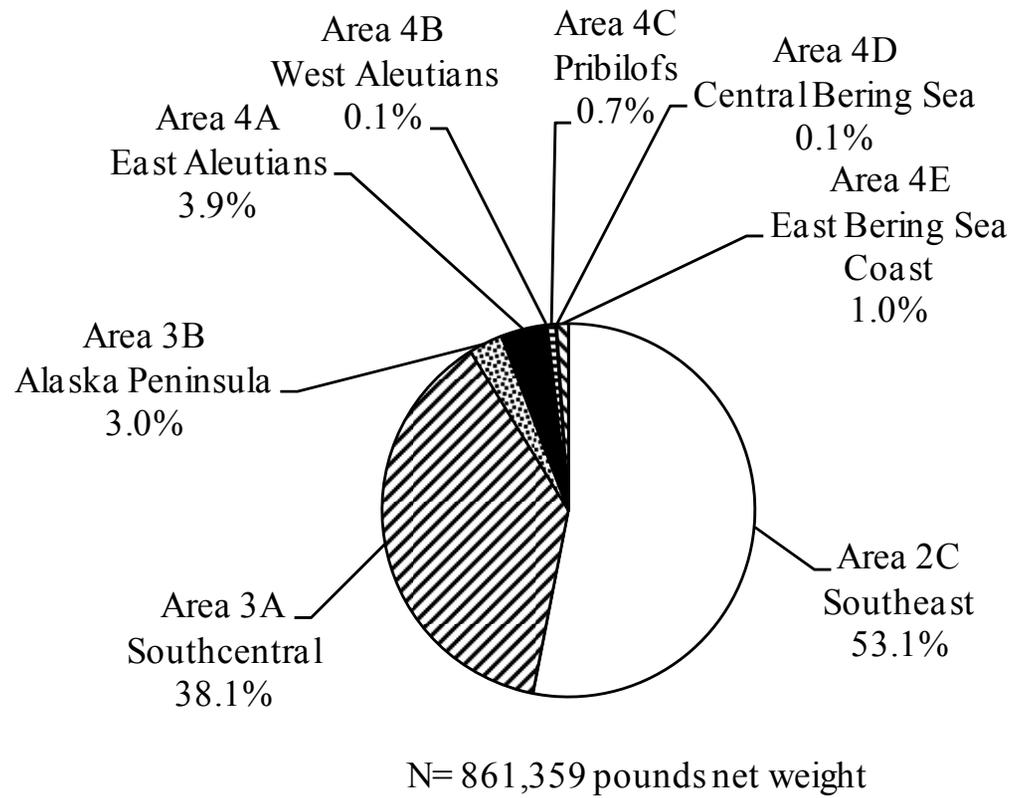


Figure 14.—Percentage of subsistence halibut harvest by regulatory area fished, 2009.

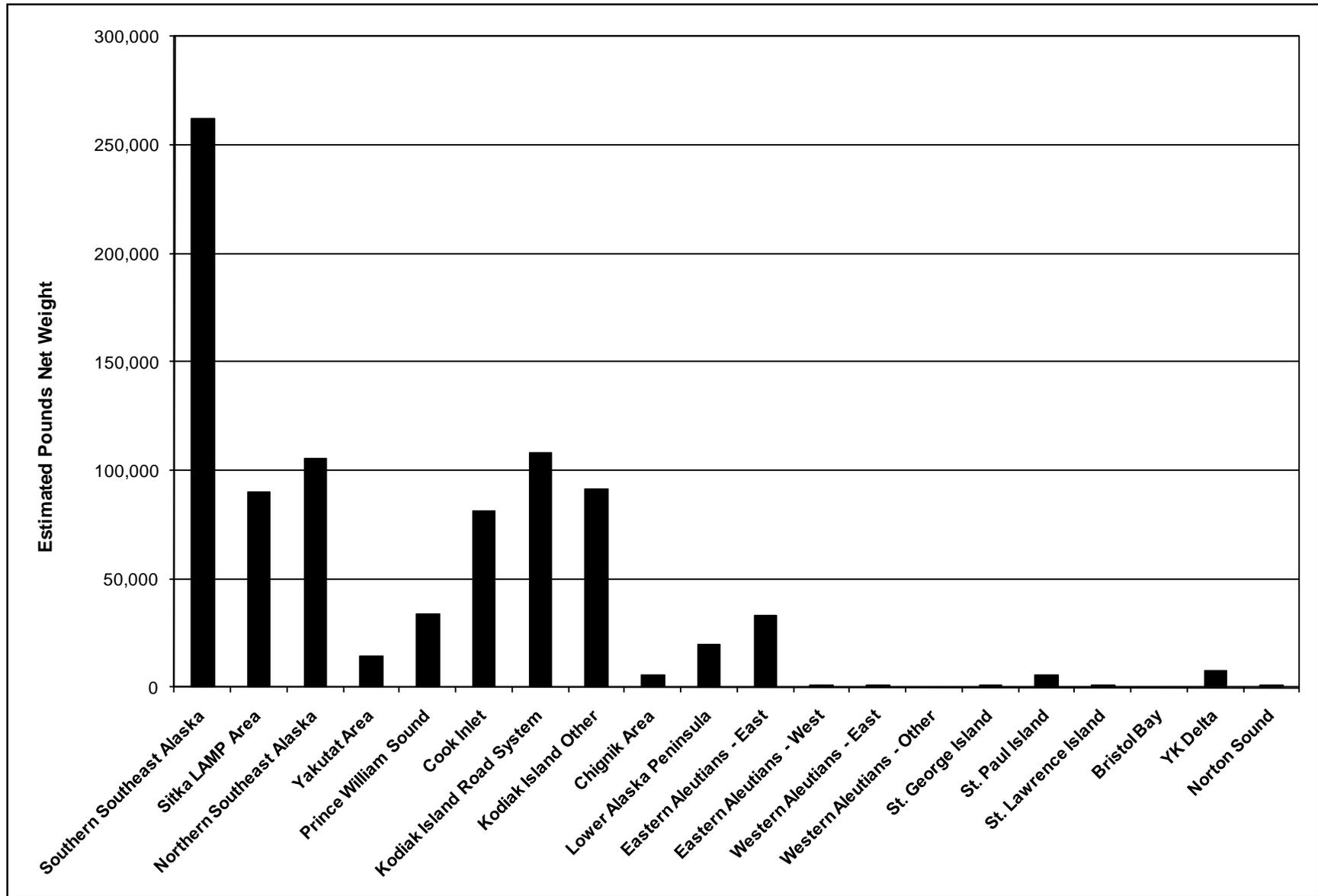


Figure 15.—Alaska subsistence halibut harvests by geographic area, 2009.

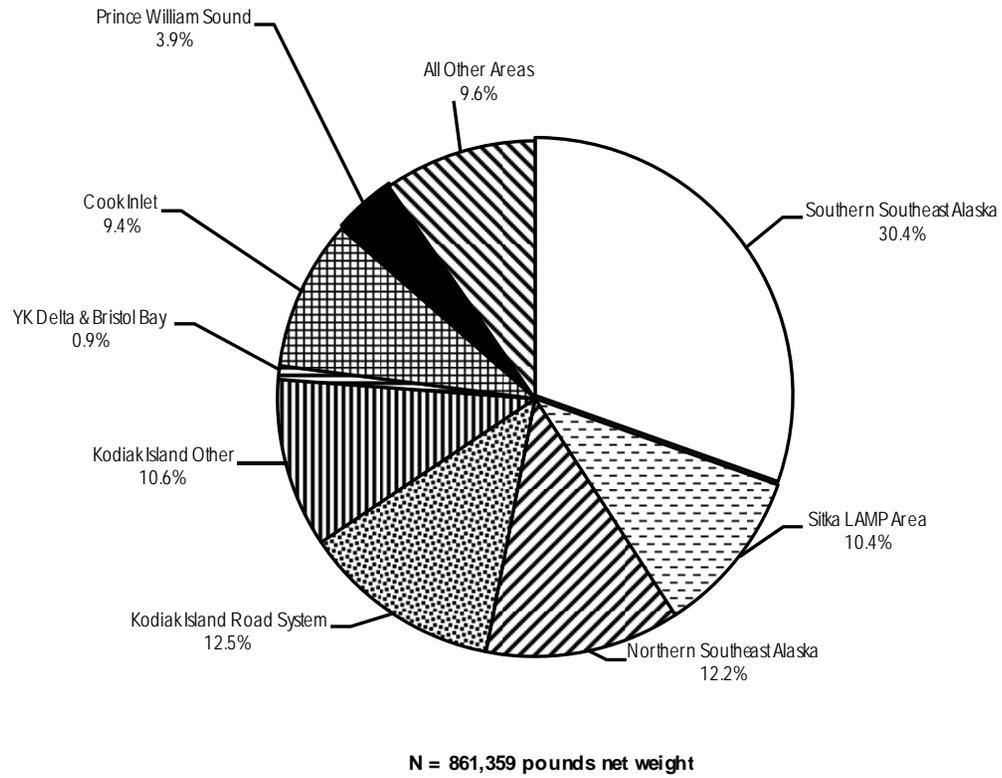


Figure 16.—Percentage of Alaska subsistence halibut harvest by geographic area, 2009.

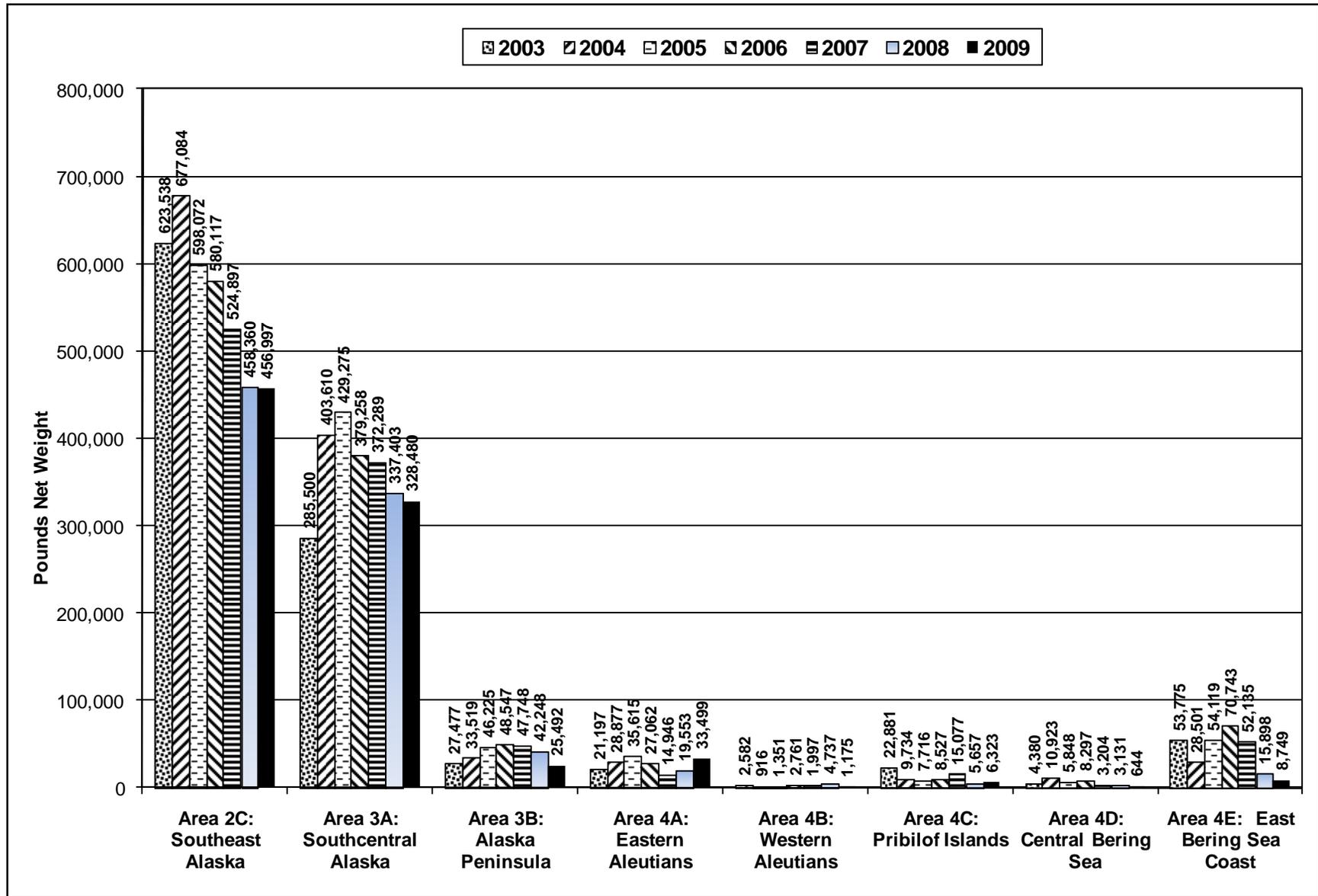


Figure 17.—Estimated subsistence halibut harvests, pounds net weight, by regulatory area fished, 2003–2009.

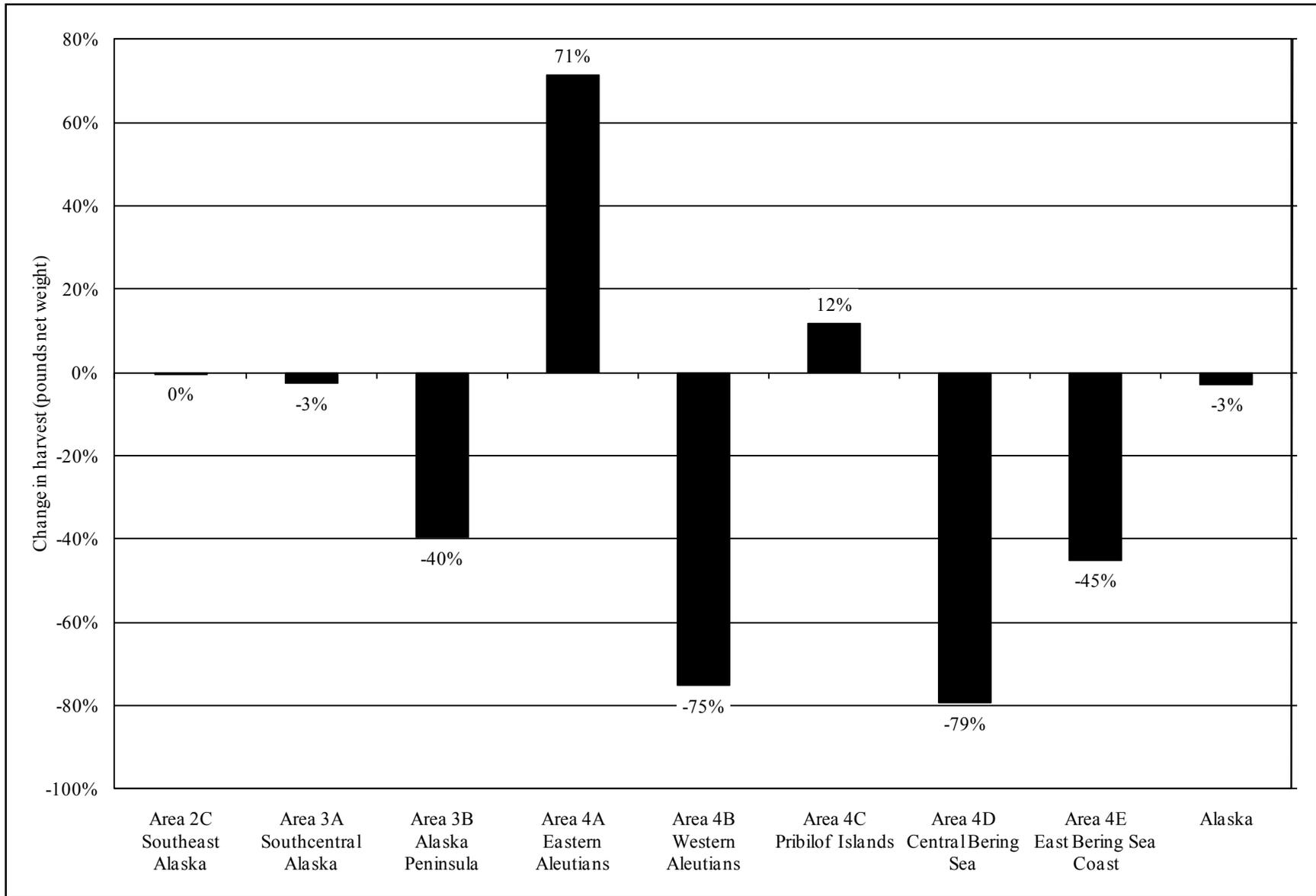


Figure 18.—Change in Alaska subsistence halibut harvests from 2008 through 2009 by regulatory area fished.

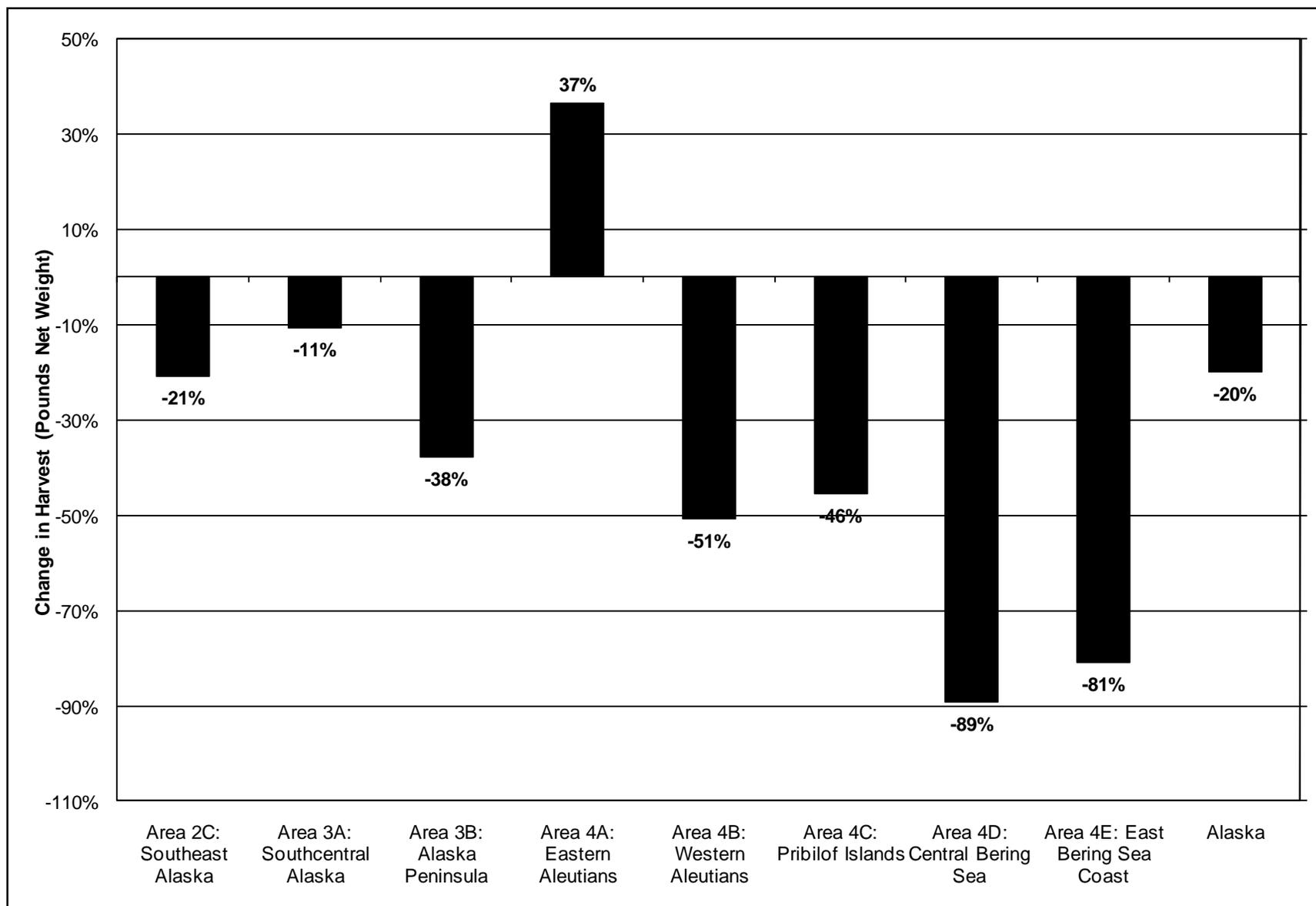


Figure 19.—Change in Alaska subsistence halibut harvests in 2009 compared to recent 6-year average (2003–2008) by regulatory area fished.

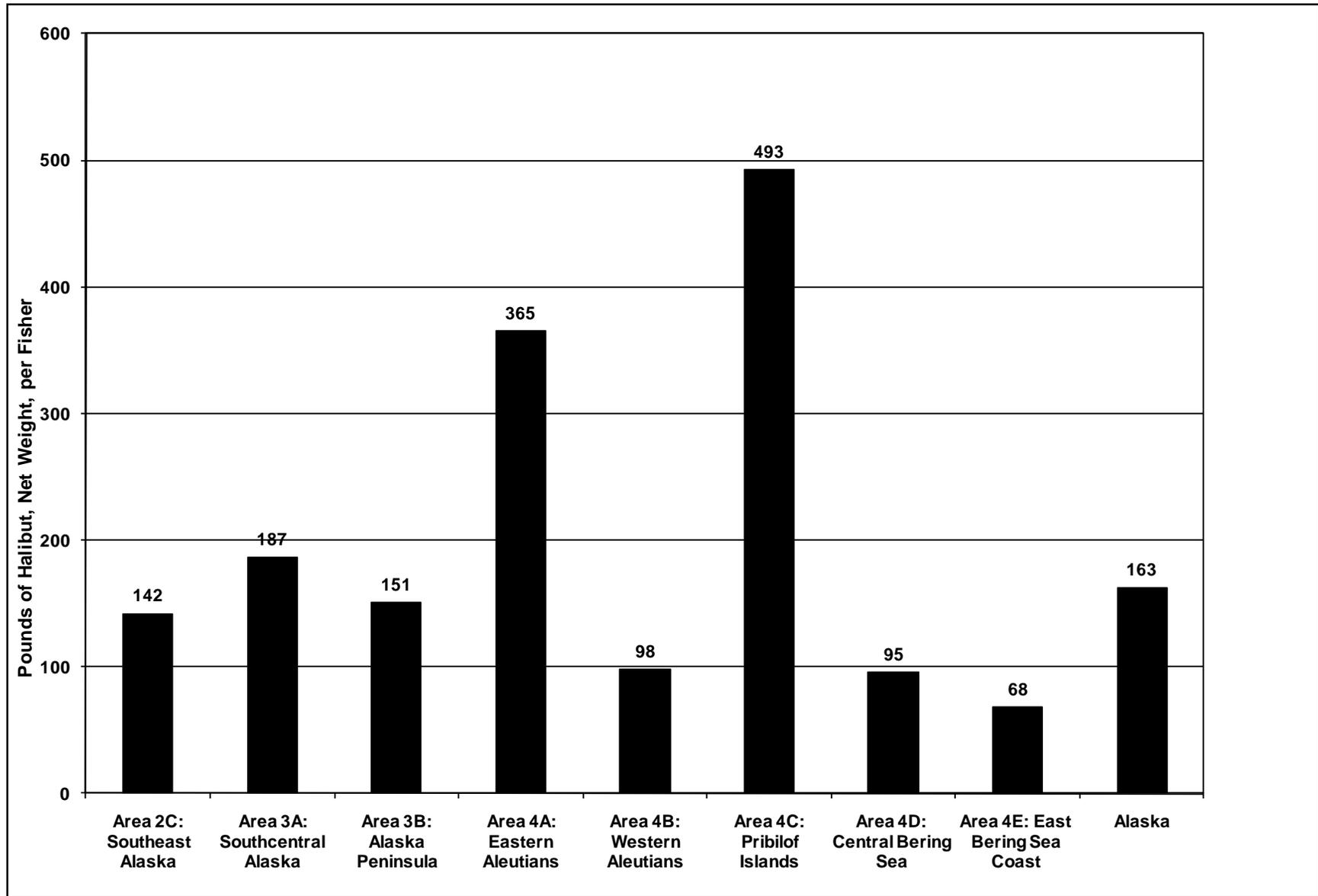


Figure 20.—Average subsistence harvest of halibut per fisher in Alaska, 2009, by regulatory area, in pounds net weight.

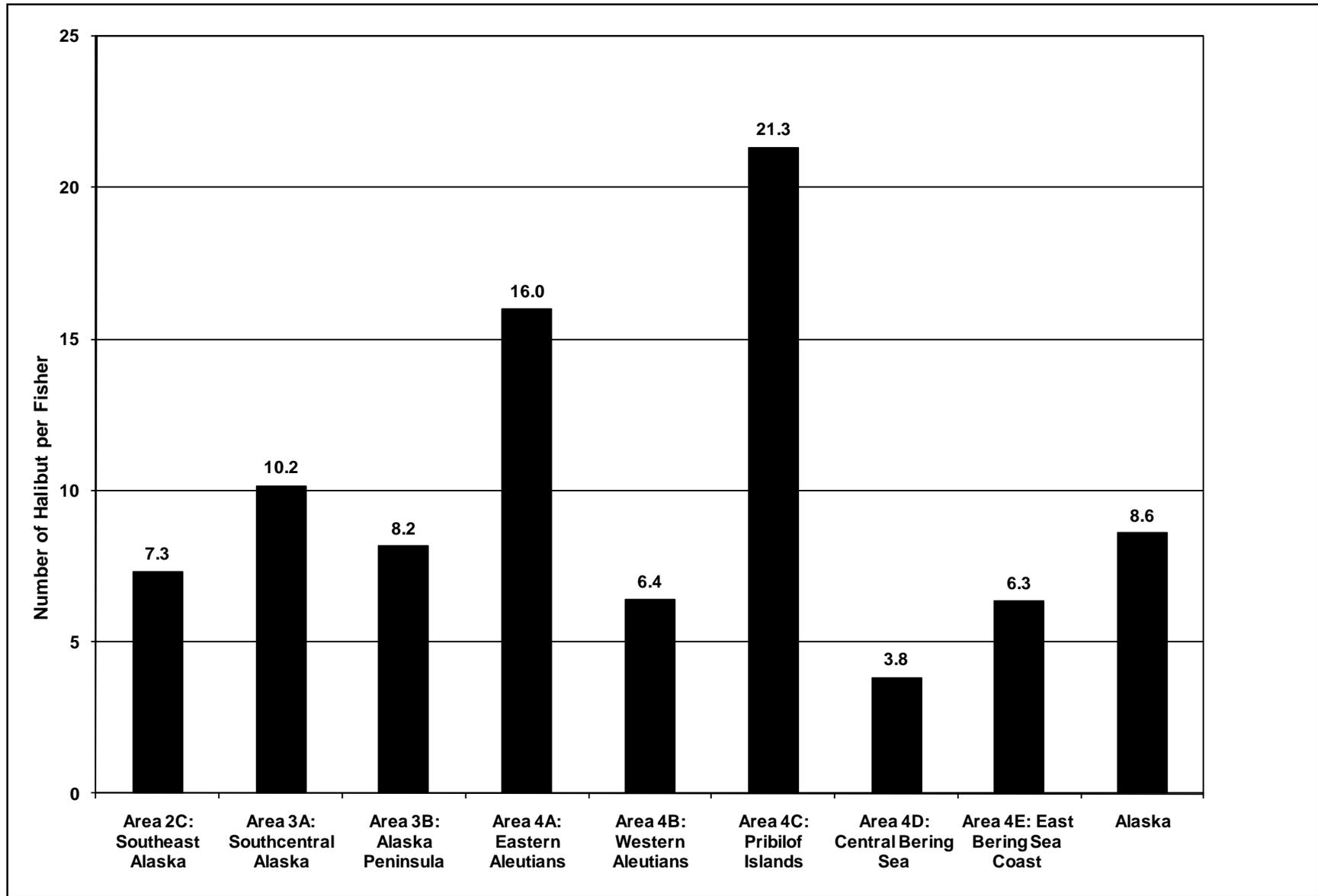


Figure 21.—Average subsistence harvest of halibut per fisher in Alaska, 2009, by regulatory area, in number of fish.

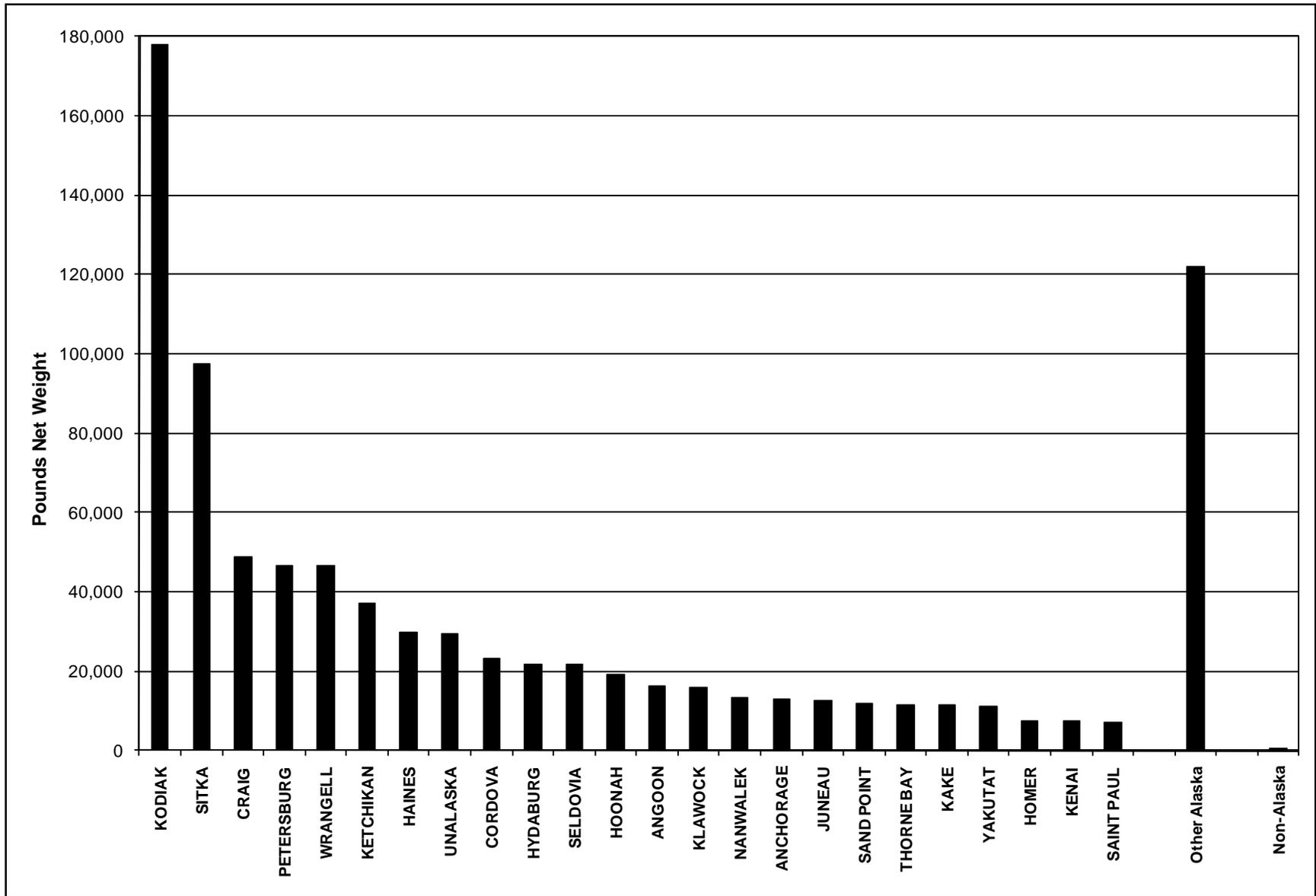


Figure 22.—Alaska subsistence halibut harvests by place of residence, 2009.

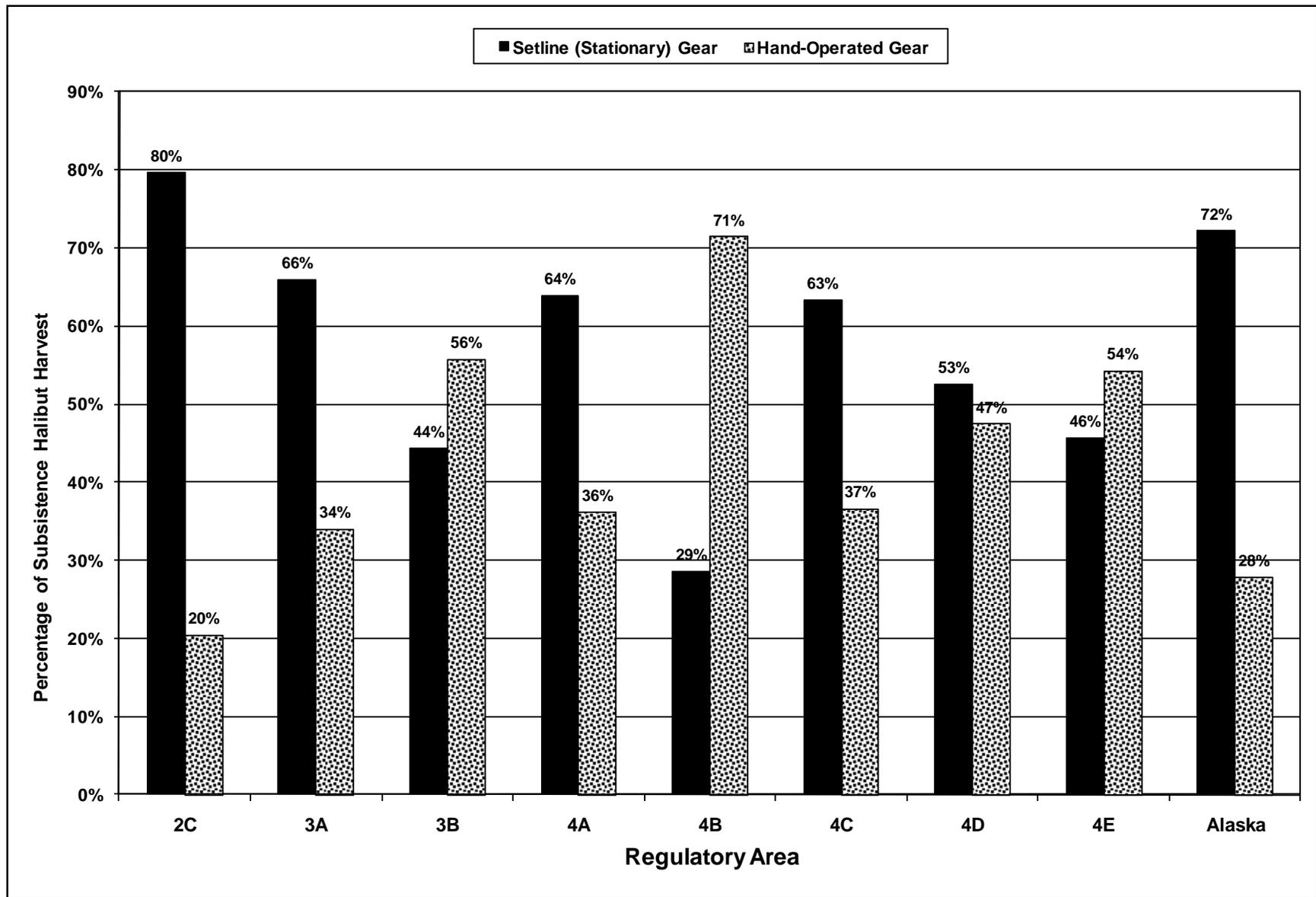


Figure 23.—Percentage of subsistence halibut harvest by gear type by regulatory area, 2009.

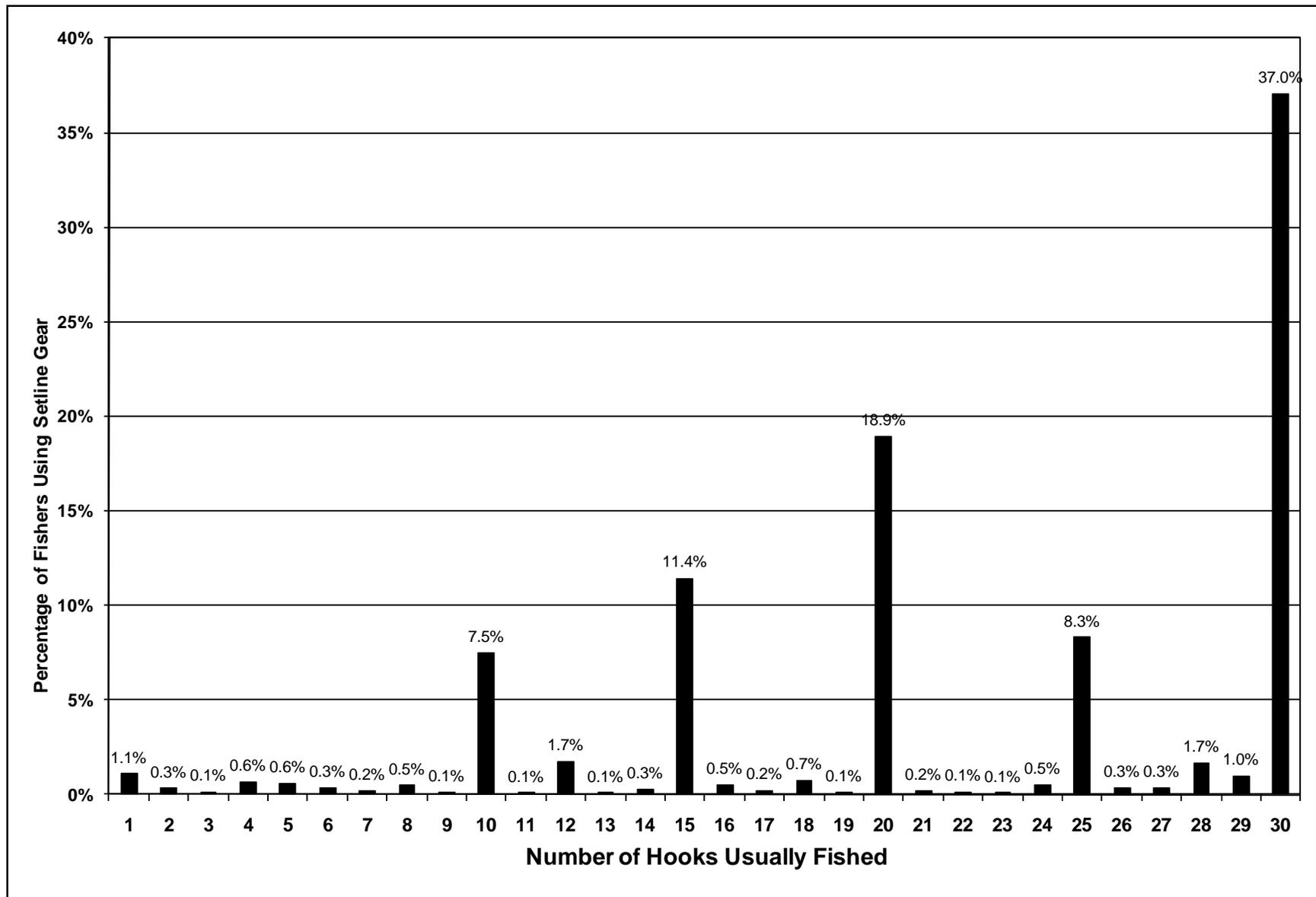


Figure 24.—Number of hooks usually fished, percentage of fishers using setline (stationary) gear, Alaska subsistence halibut fishery, 2009.

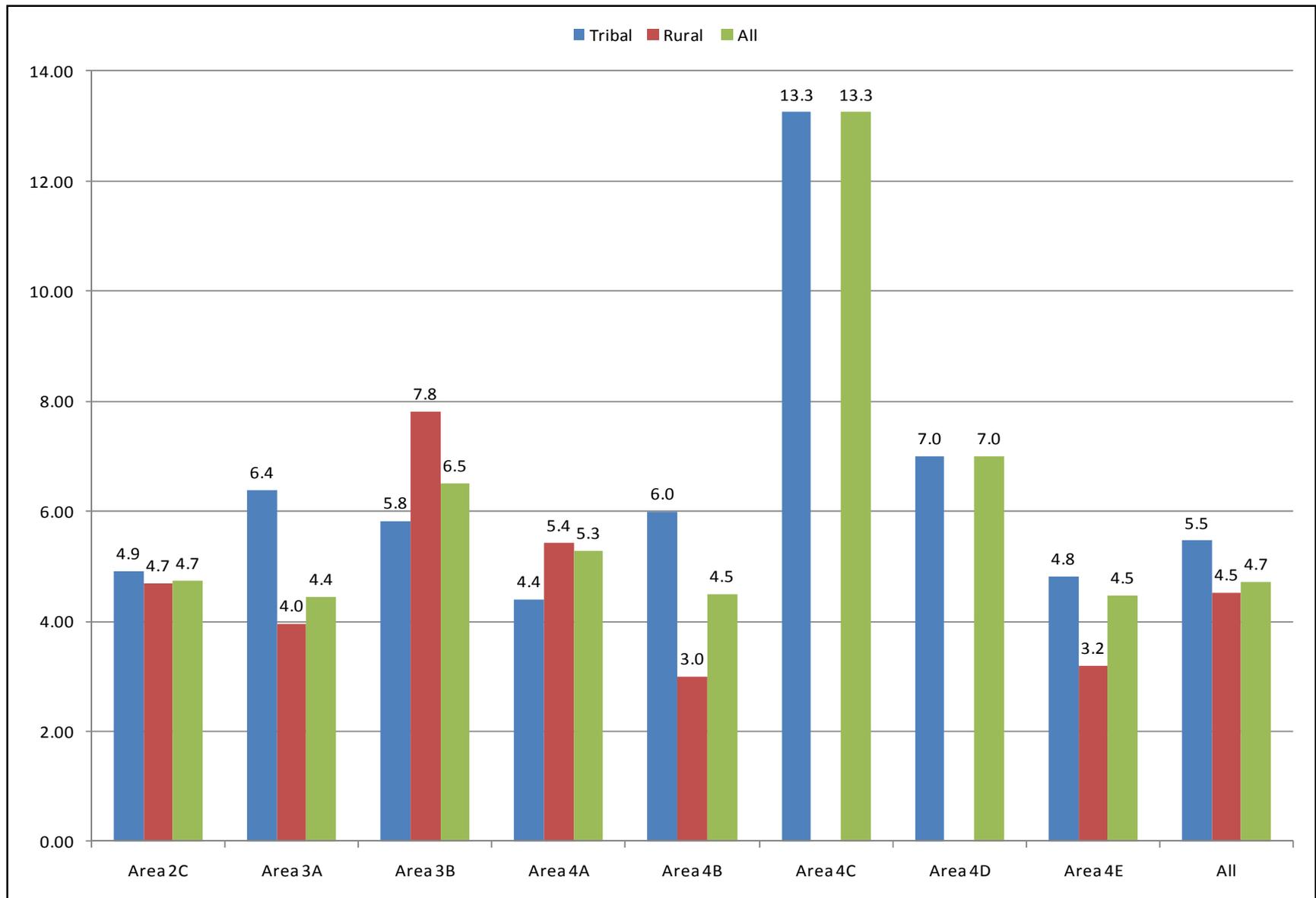


Figure 25.—Average number of subsistence fishing trips for halibut by regulatory area and SHARC type, 2009.

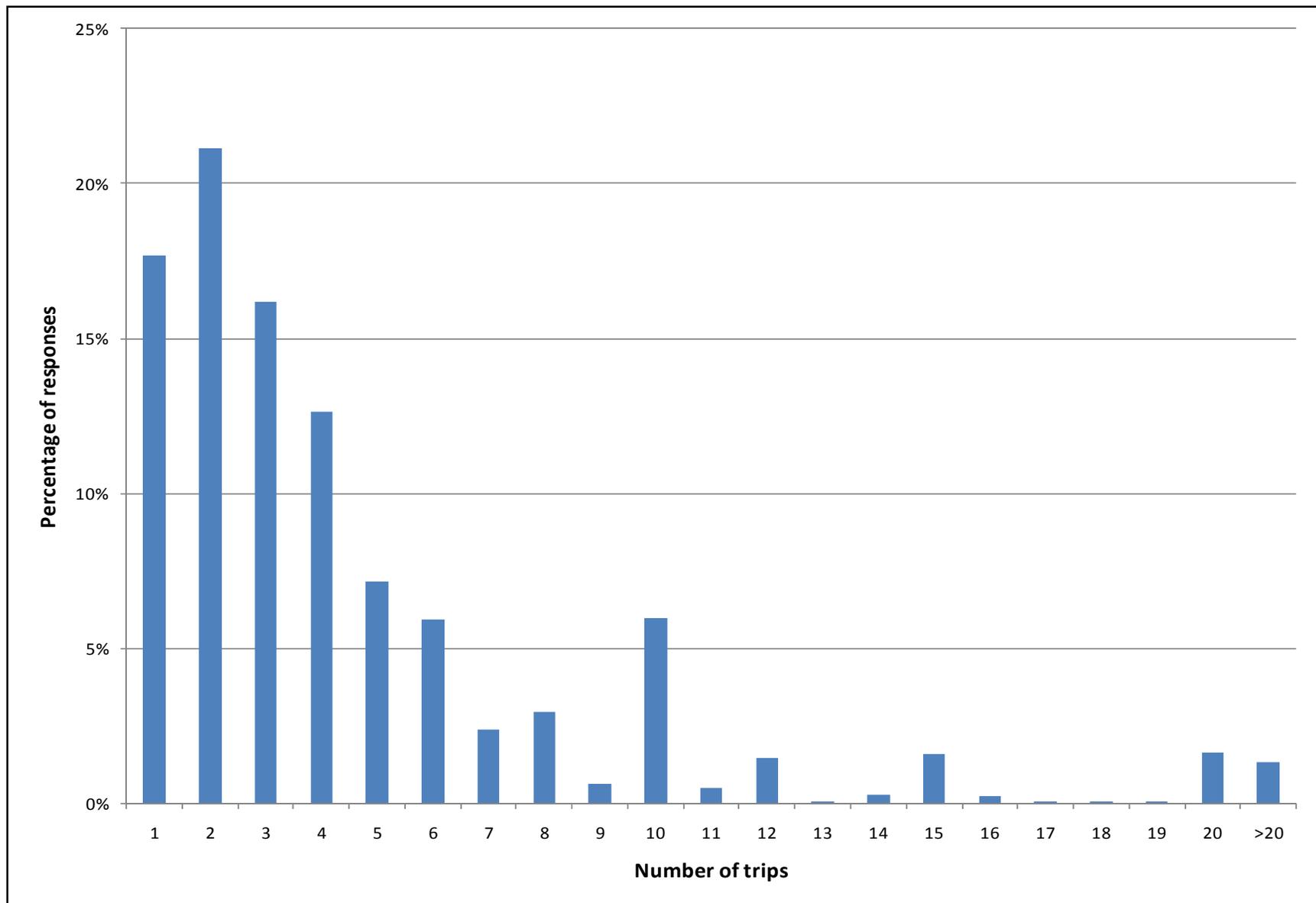


Figure 26.—Number of subsistence fishing trips for halibut, 2009.

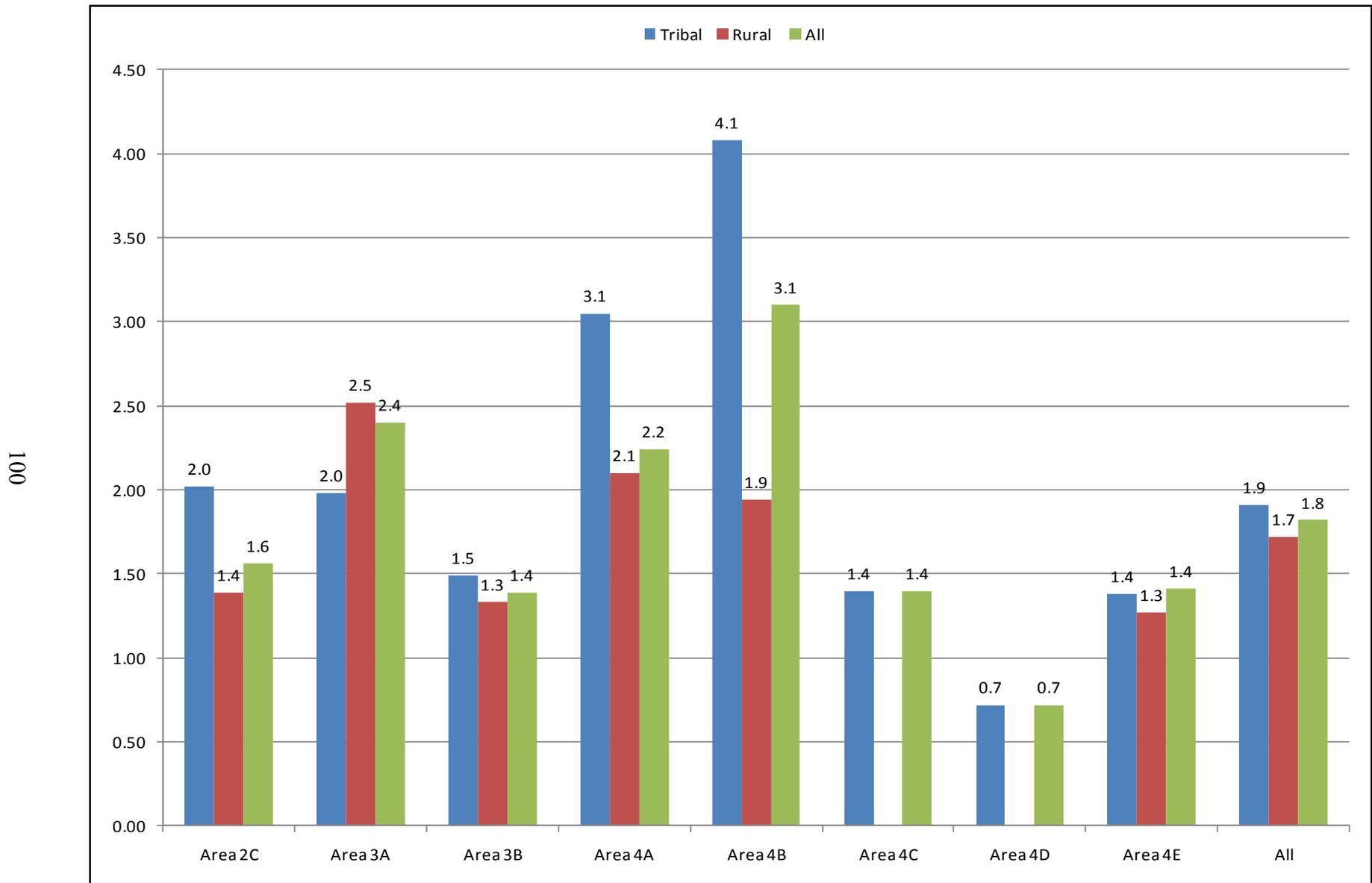


Figure 27.—Average number of halibut harvested per subsistence fishing trip by regulatory area and SHARC type, 2009.

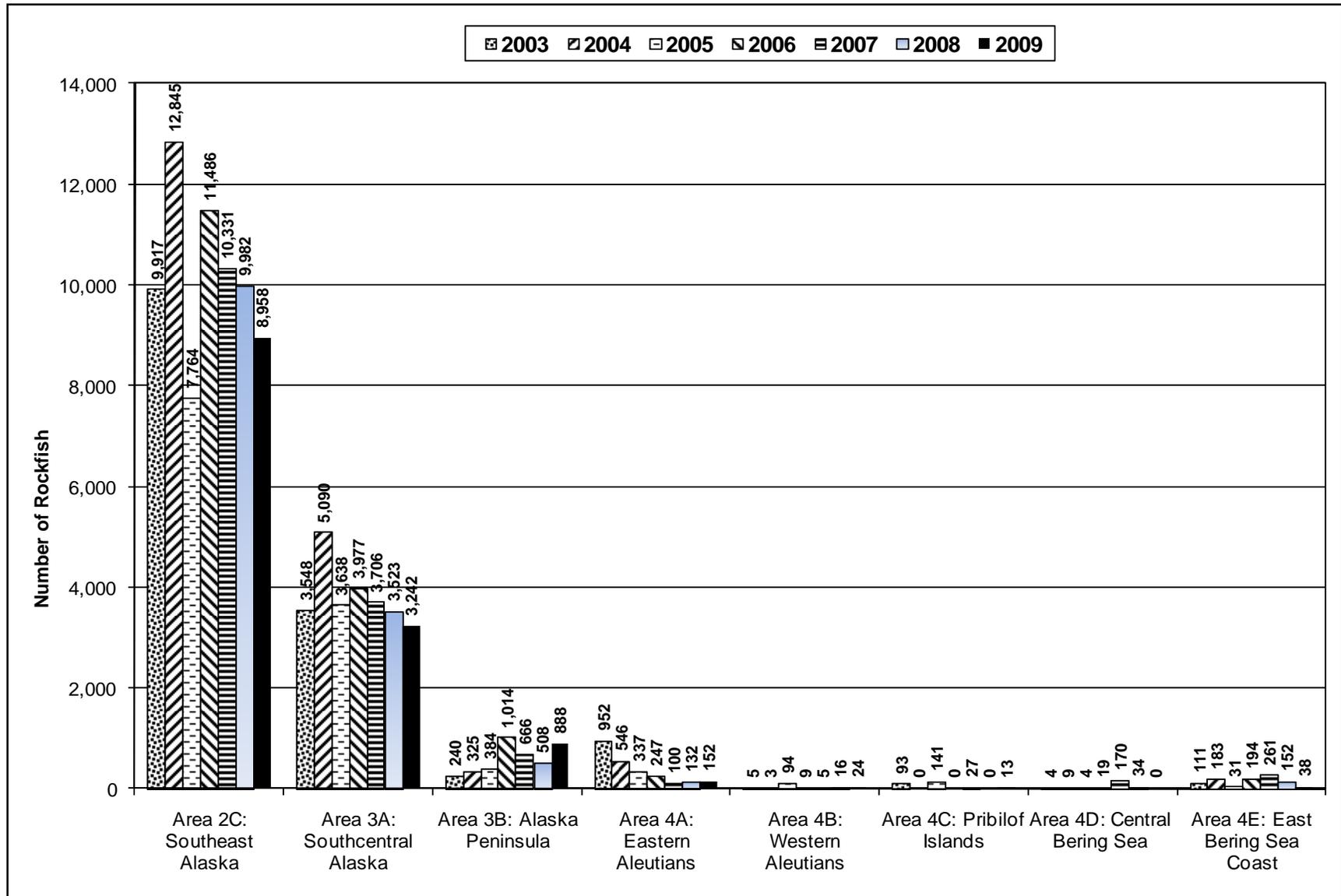


Figure 28.—Estimated incidental harvests of rockfish in the Alaska subsistence halibut fishery, number of fish, by regulatory area fished, 2003–2009.

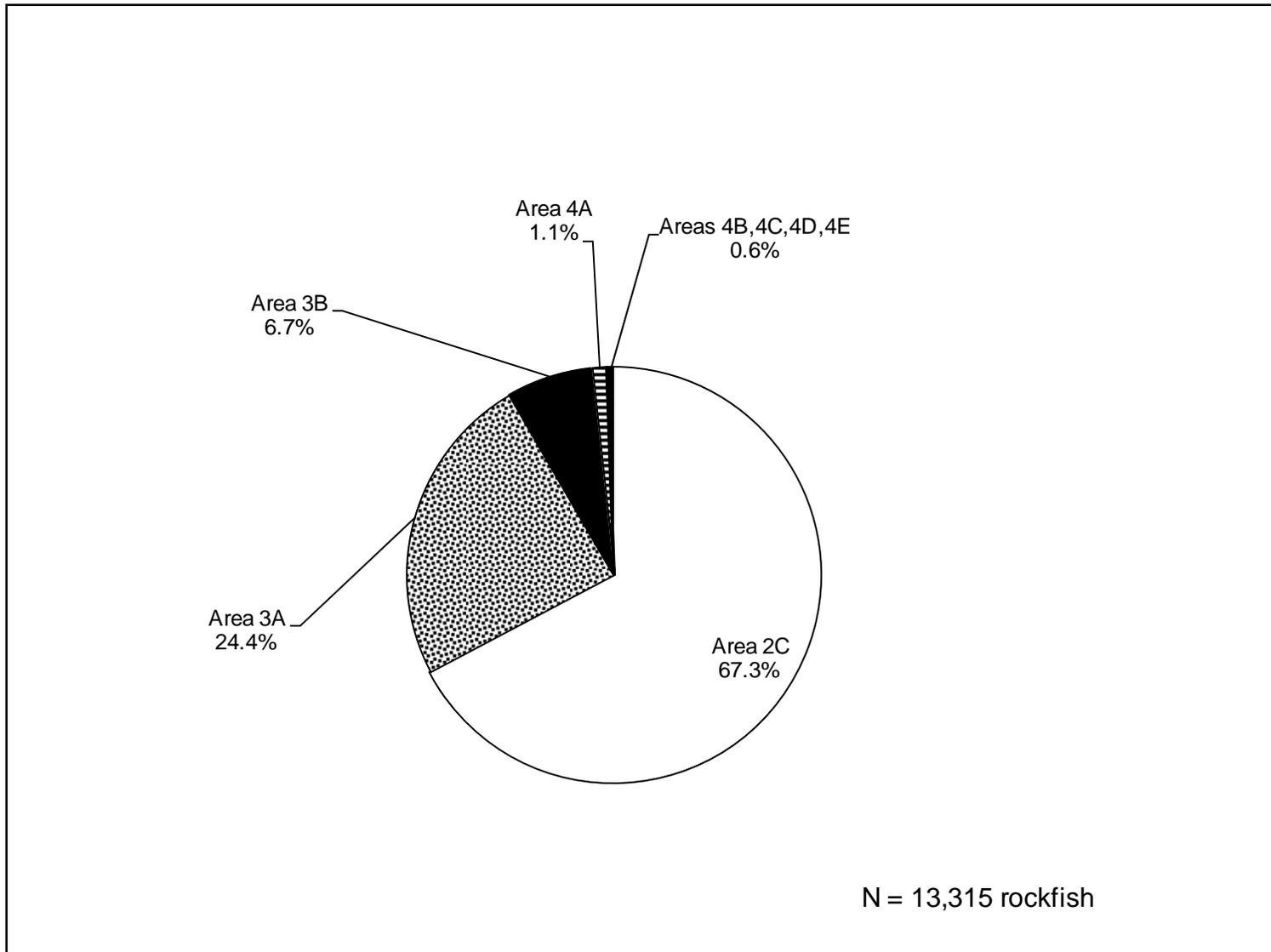


Figure 29.—Percentage of incidental harvest of rockfish by regulatory area fished, 2009.

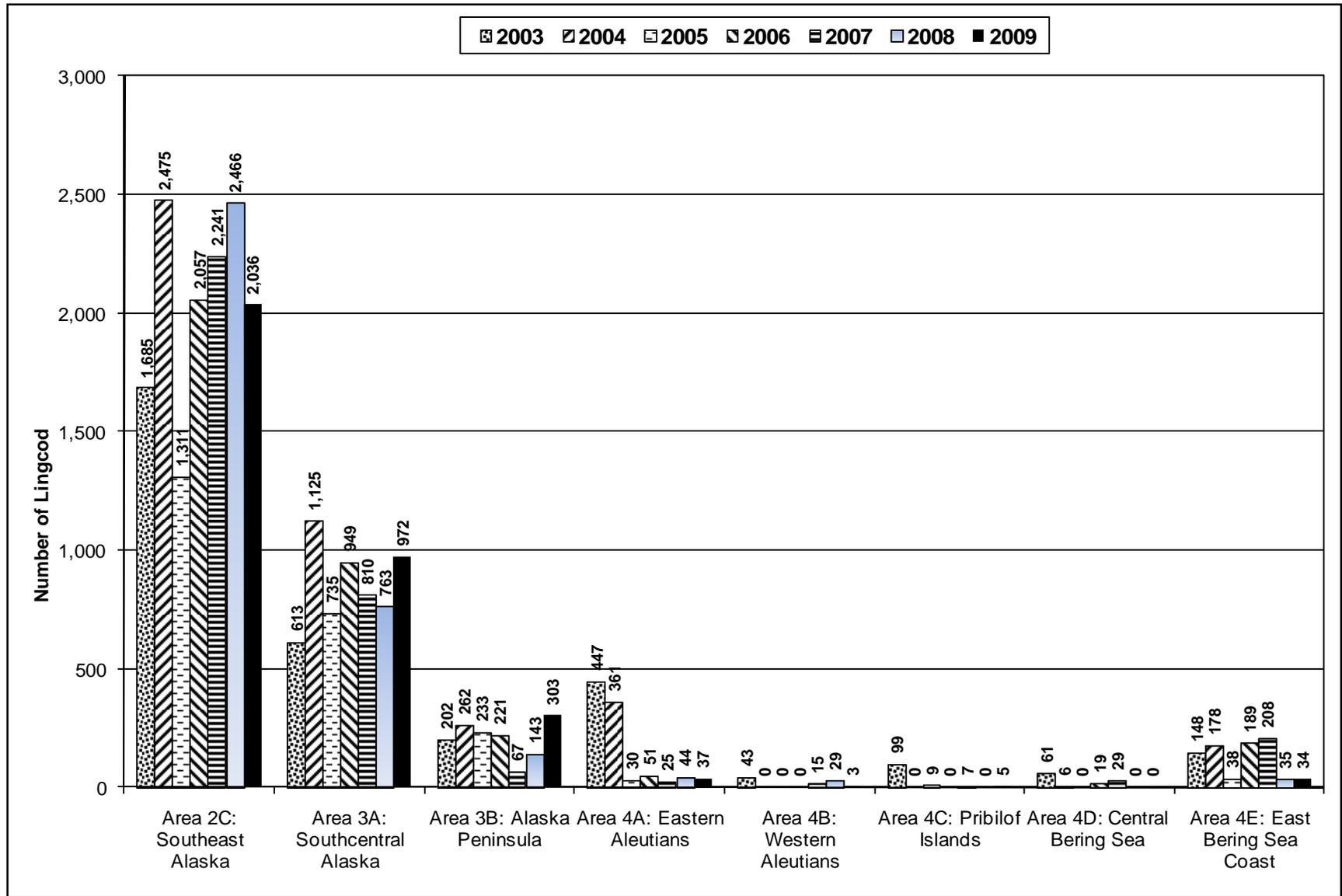


Figure 30.—Estimated incidental harvests of lingcod in the Alaska subsistence halibut fishery, number of fish, by regulatory area fished, 2003–2009.

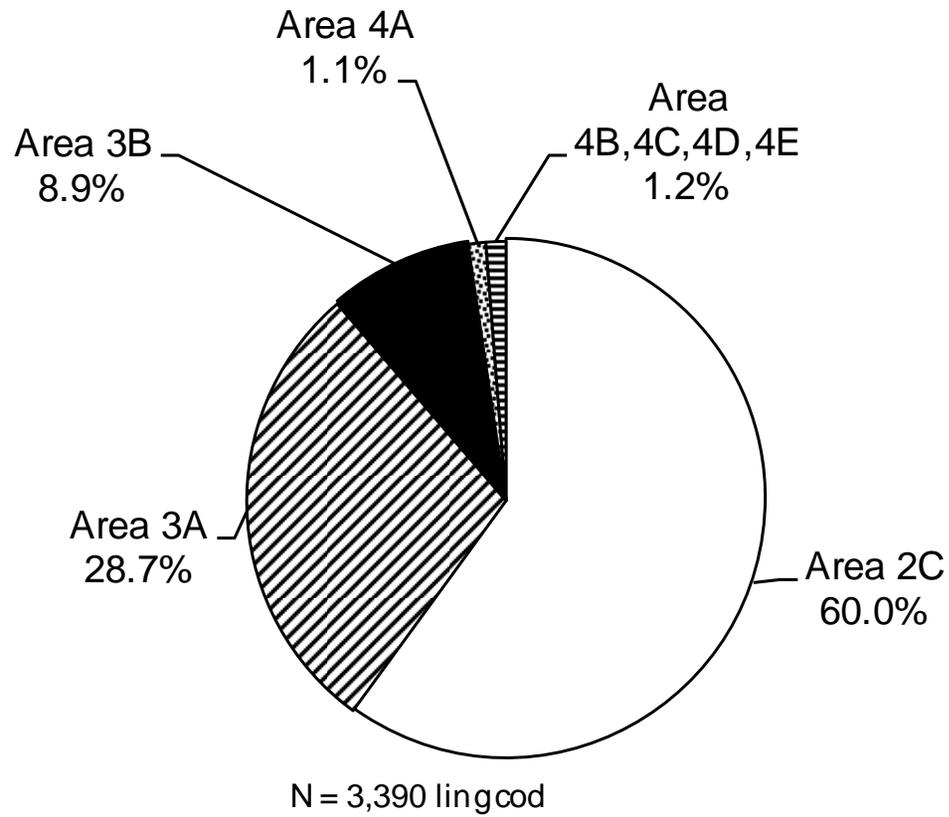


Figure 31.—Percentage of incidental harvest of lingcod by regulatory area fished, 2009.

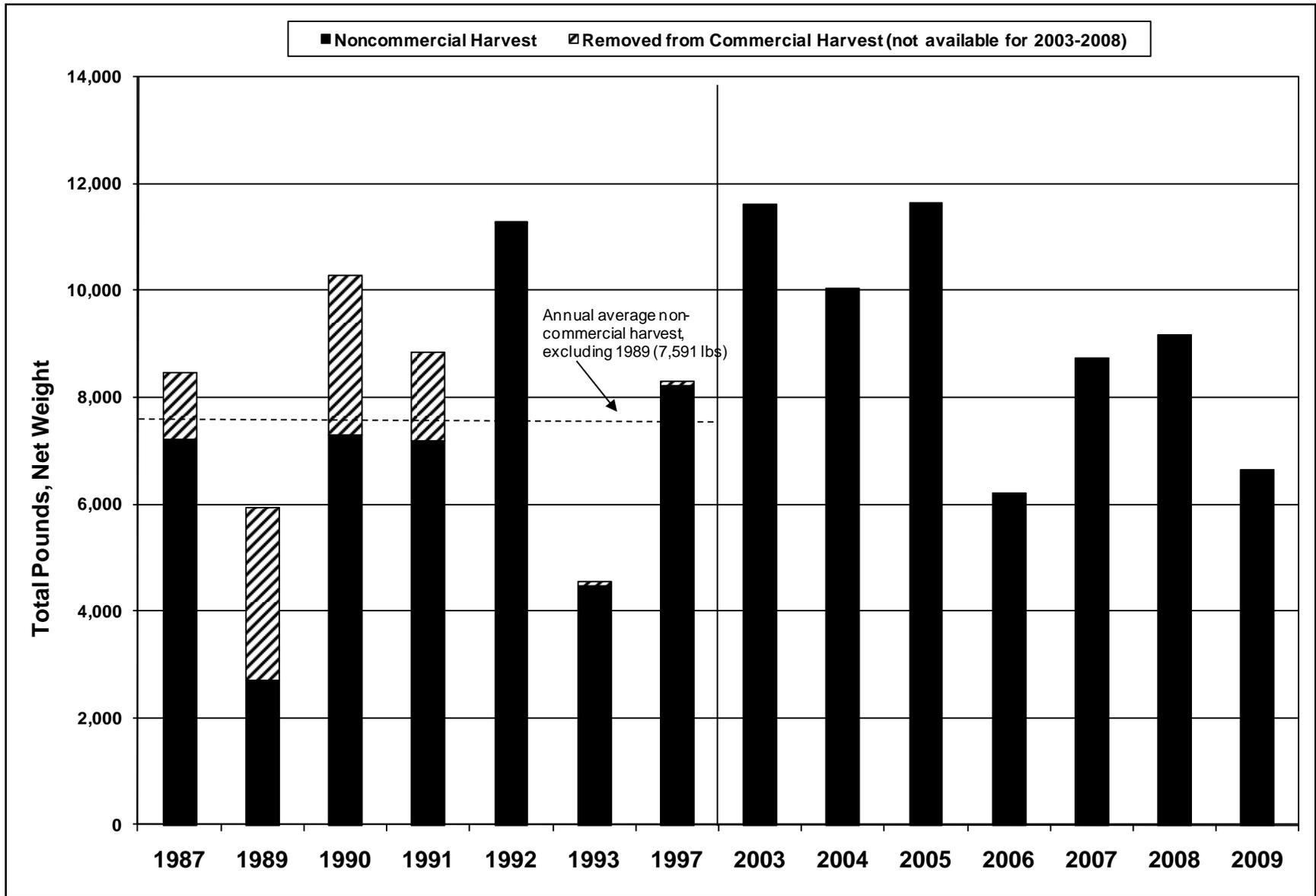


Figure 32.—Estimated harvests of halibut for home use, Port Graham.

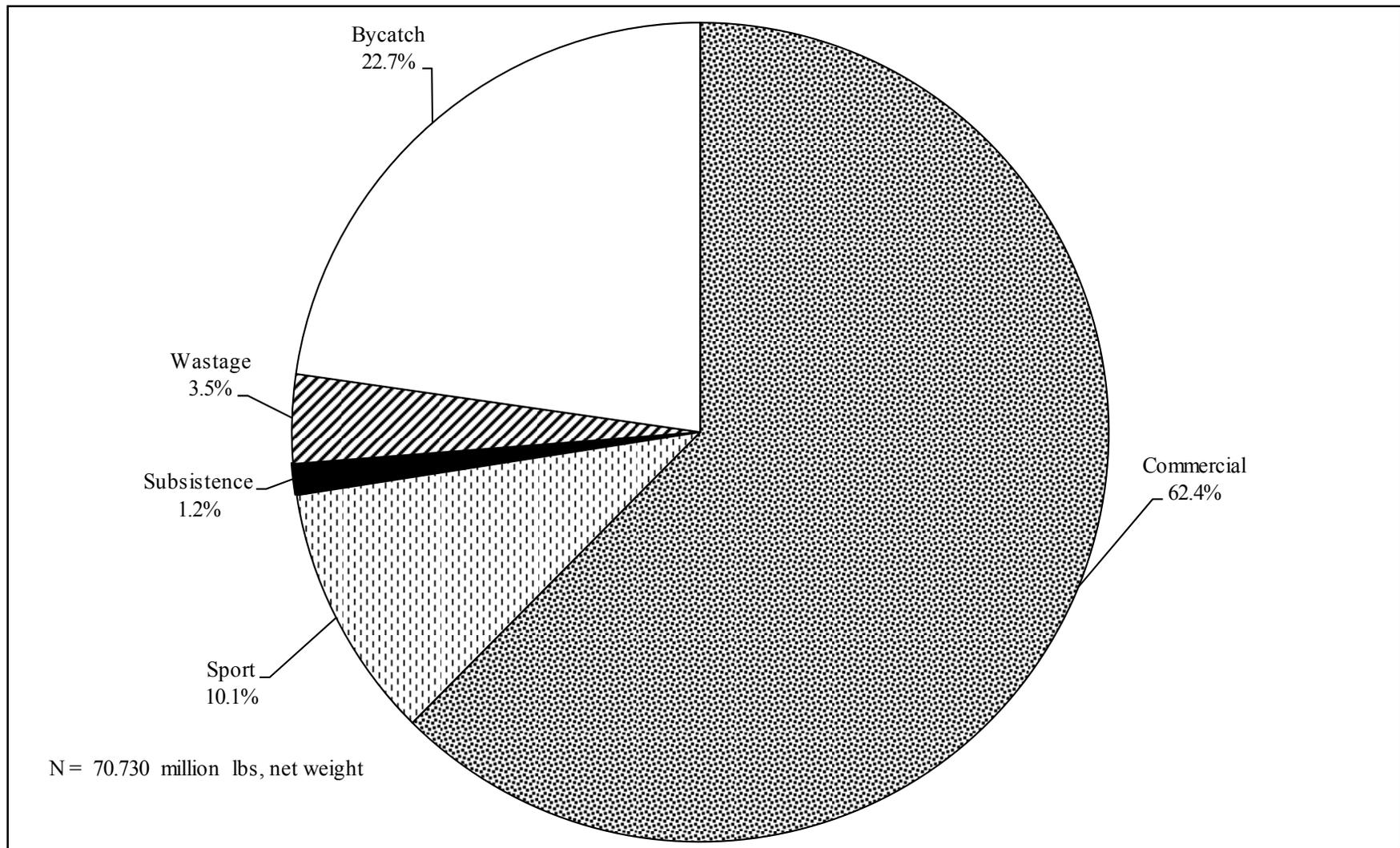


Figure 33.—Halibut removals, Alaska, 2009.

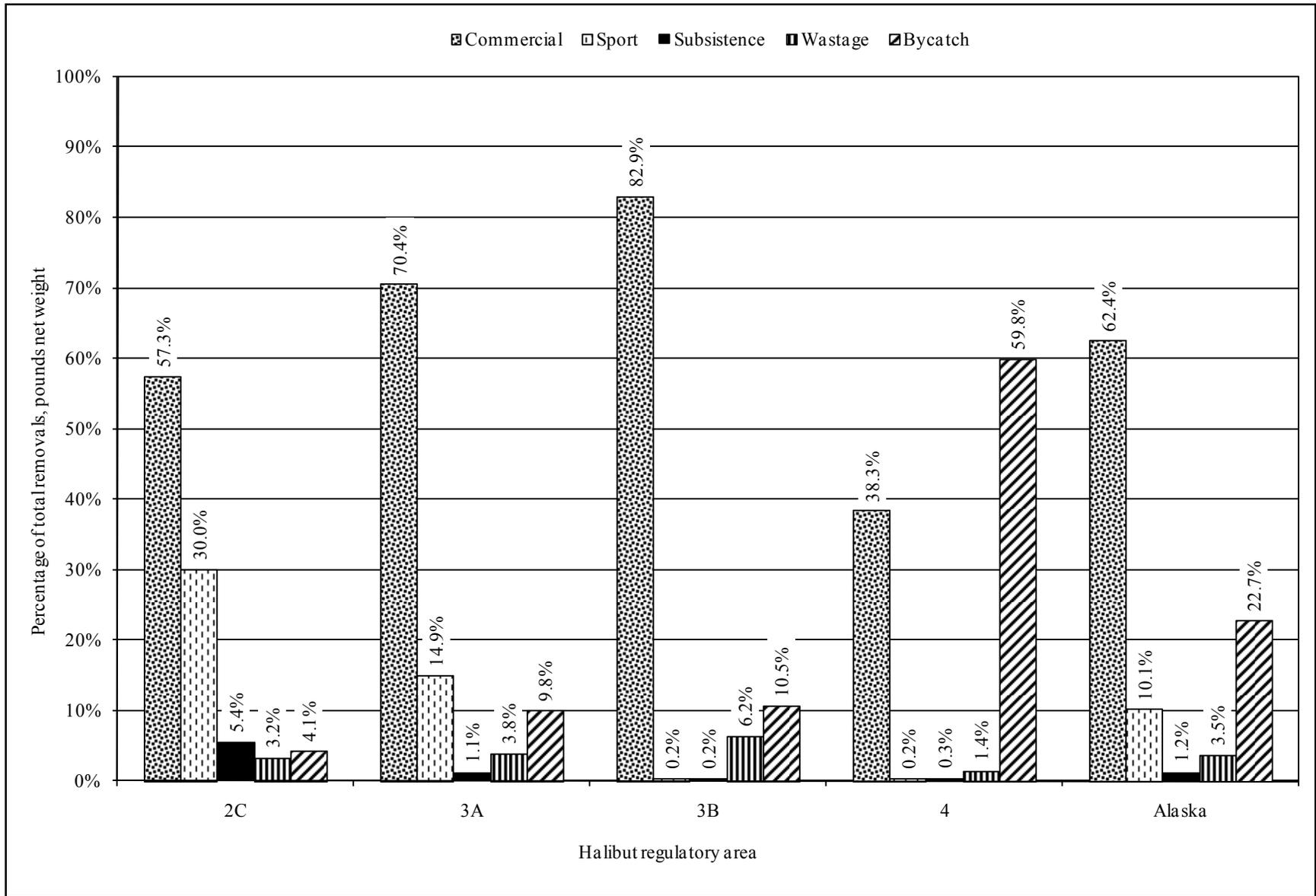


Figure 34.—Halibut removals in Alaska by regulatory area and removal category, 2009.

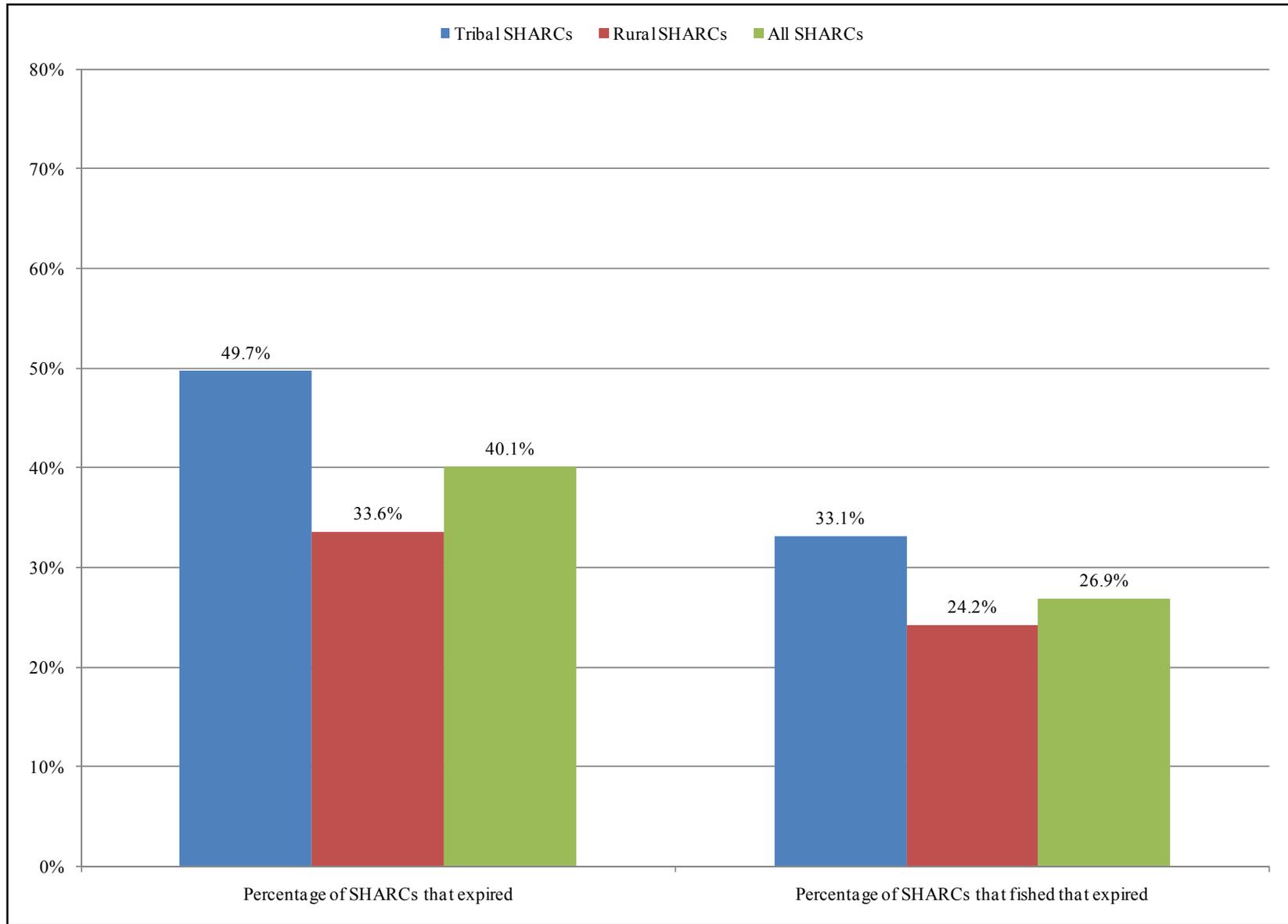


Figure 35.—Percentage of SHARC holders, and SHARC holders who fished for halibut, who did not renew their SHARC, by SHARC type.

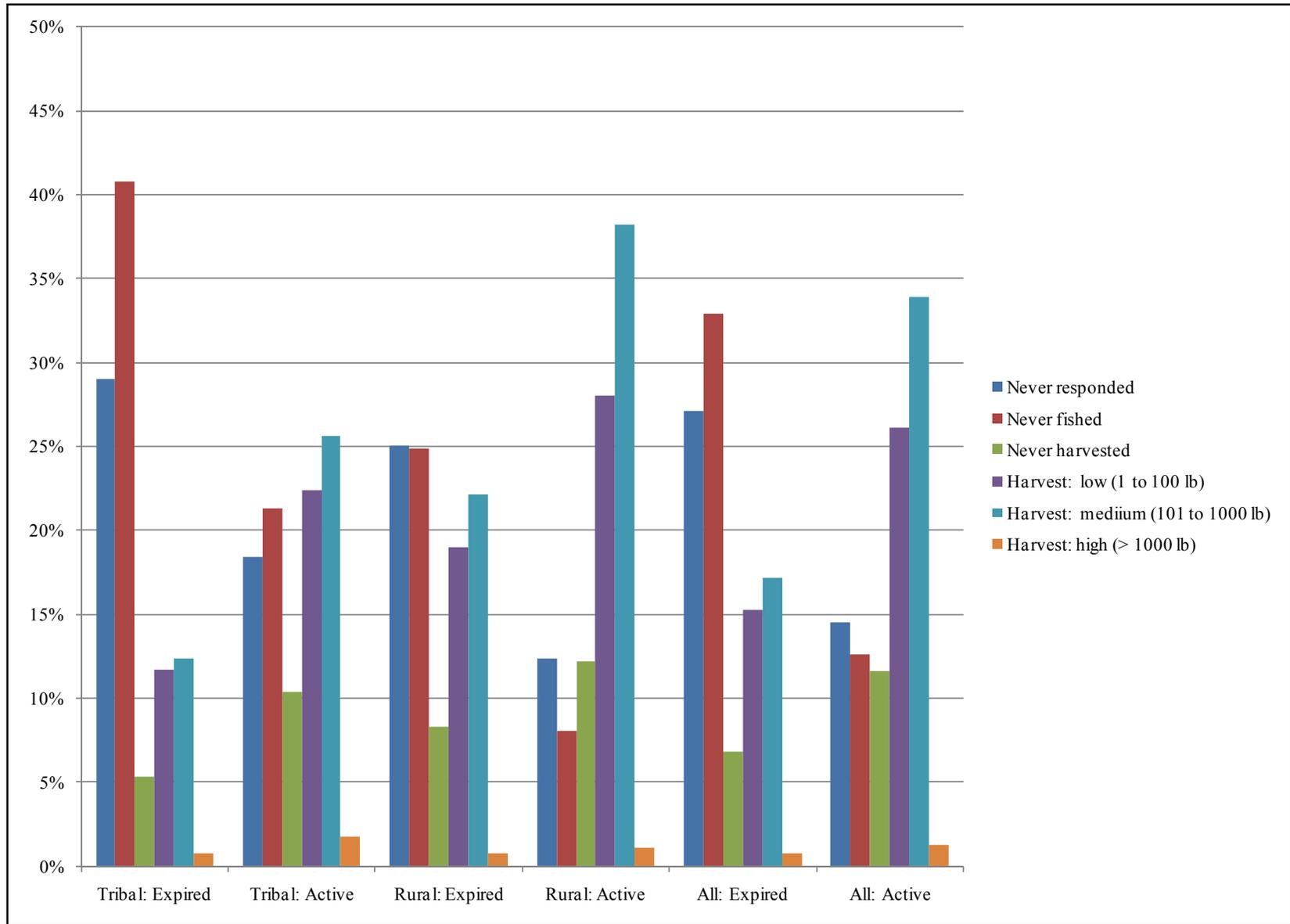


Figure 36.—Percentage of SHARCs that were not renewed by survey response type and SHARC type.

APPENDICES

Appendix A.—List of eligible tribes and rural communities (from Federal Register).

Chichagof Island at 57°22'03" N. lat., 135°43'00" W. long., and
 (B) A line from Chichagof Island at 57°22'35" N. lat., 135°41'18" W. long. to Baranof Island at 57°22'17" N. lat., 135°40'57" W. lat.; and

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

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

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

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

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

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

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

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

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

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

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

56°55.5'N lat., 135°57.0'W long.

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

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

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

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

HALIBUT REGULATORY AREA 2C

Rural Community	Organized Entity
Angoon	Municipality
Coffman Cove	Municipality
Craig	Municipality
Edna Bay	Census Designated Place
Elfin Cove	Census Designated Place
Gustavus	Census Designated Place
Haines	Municipality
Hollis	Census Designated Place
Hoonah	Municipality
Hydaburg	Municipality
Hyder	Census Designated Place
Kake	Municipality
Kasaan	Municipality
Klawock	Municipality
Klukwan	Census Designated Place
Metlakatla	Census Designated Place
Meyers Chuck	Census Designated Place
Pelican	Municipality
Petersburg	Municipality
Point Baker	Census Designated Place
Port Alexander	Municipality
Port Protection	Census Designated Place
Saxman	Municipality
Sitka	Municipality
Skagway	Municipality
Tenakee Springs	Municipality
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
Diomedes (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
Shaktolik	Municipality
Sheldon Point (Nunam Iqua)	Municipality
Shishmaref	Municipality
Solomon	Census Designated Place
South Naknek	Census Designated Place
St. Michael	Municipality
Stebbins	Municipality
Teller	Municipality
Togiak	Municipality
Toksook Bay	Municipality
Tuntutuliak	Census Designated Place
Tununak	Census Designated Place

**HALIBUT REGULATORY AREA 4E—
Continued**

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

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

HALIBUT REGULATORY AREA 2C

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

HALIBUT REGULATORY AREA 3A

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

**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
Kodiak City	Village of Salamatoff 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	Ivanof Bay Village
King Cove	Agdaagux Tribe of King Cove
Nelson Lagoon	Native Village of Belkofski
Perryville	Native Village of Nelson Lagoon
Sand Point	Pauloff Harbor Village
	Native Village of Unga
	Qagan 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	Togiak	Traditional Village of Togiak
		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		Village of Bill Moore's Slough	White Mountain	Native Village of White Mountain
St. Paul	Communities of St. Paul Island and St. George Island	Koyuk	Native Village of Koyuk		
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	Napakiaik	Native Village of Napakiaik		
Diomed (Inalik)	Native Village of Diomed (Inalik)	Napaskiak	Native Village of Napaskiak		
HALIBUT REGULATORY AREA 4E		Newtok	Newtok Village		
		Nightmute	Native Village of Nightmute		
			Umkumiute Native Village		
Alakanuk	Village of Alakanuk	Nome	King Island Native Community		
Aleknagik	Native Village of Aleknagik		Nome Eskimo Community		
Bethel	Orutsaramuit Native Village	Oscarville	Oscarville Traditional Village		
Brevig Mission	Native Village of Brevig Mission	Pilot Point	Native Village of Pilot Point		
Chefornak	Village of Chefornak	Platinum	Platinum Traditional Village		
Chevak	Chevak Native Village	Port Heiden	Native Village of Port Heiden		
Clark's Point	Village of Clark's Point	Quinhagak	Native Village of Quinhagak		
Council	Native Village of Council	Scammon Bay	Native Village of Scammon Bay		
Dillingham	Native Village of Dillingham	Shaktoolik	Native Village of Shaktoolik		
	Native Village of Ekuq	Sheldon Point (Nuna Iqua)	Native Village of Sheldon's Point		
	Native Village of Kanakanak	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,

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF SUBSISTENCE

SEAN PARNELL, GOVERNOR

333 Raspberry Road
ANCHORAGE, AK 99518-1599
PHONE: (907) 267-2353
FAX: (907) 267-2450

January xx, 2010

TO:

SUBJECT: Subsistence Halibut Fishing Report and Harvest Survey

In January 2009, we informed you about the sixth year of the project conducted by the Division of Subsistence of ADF&G to estimate the subsistence harvests of halibut in Alaska. As part of a contract with the National Marine Fisheries Service (NMFS), in early 2009 we mailed a short (one-page) questionnaire to every person who obtained a subsistence halibut registration certificate (called a "SHARC") from NMFS. Through the survey, we collected information about participation in the fishery and the number of halibut, rockfish, and lingcod harvested for subsistence use in 2008. Participation in the survey was voluntary. Of the 11,565 SHARC holders, 7,316 (63% completed the survey – an excellent response.

We have completed the final report for the project as part of our Technical Paper Series (No. 348). A copy is enclosed. Also enclosed are copies of a short overview of the study findings. You can also obtain the overview and the complete report through the Division of Subsistence website at www.subsistence.adfg.state.ak.us. Please contact us if you have questions.

We also wanted to let you know that we will be doing the survey again beginning in early February 2010 to collect information about subsistence halibut harvests in 2009. Again, we'll be mailing a short questionnaire to every SHARC holder, and asking them to voluntarily fill it out and send it back to us (we pay the postage). We will again compile the harvest information in a report to NMFS that will be available to tribes and to the public in late 2010. In our view, collecting and reporting accurate information about subsistence halibut harvests is important in supporting this fishery.

In addition to mailing out the survey forms, Division of Subsistence staff plan to visit some communities in 2010 to provide information about the subsistence halibut fishery program, and to encourage subsistence fishers to obtain registration cards (SHARCs) and return the surveys. We will of course coordinate these visits with tribal governments. We

will also coordinate collection of subsistence halibut harvest information with other subsistence projects taking place in some communities, such as the collection of harbor seal and sea lion harvest data in communities of southeast, southcentral, and southwest Alaska.

As we noted, an important feature of the subsistence halibut regulations is that eligible people who want to subsistence fish need to obtain a subsistence halibut registration certificate (called a "SHARC" for short). Applications are available from NMFS at the address below. People can also submit applications on the Internet by logging on to: www.fakr.noaa.gov/ram and following the links to the subsistence halibut program. We encourage you to get the word out about this program to your tribal members who subsistence fish for halibut. More information about the subsistence halibut fishing program is available from NMFS as follows:

On the Internet: www.fakr.noaa.gov/ram/subsistence/halibut.htm
By e-mail: RAM.Alaska@noaa.gov
By phone: 800-304-4846 (option #2)
By mail: Alaska Region, National Marine Fisheries Service
Restricted Access Management (RAM) Program
PO Box 21668
Juneau, AK 99802

We will develop public notices about our subsistence halibut harvest survey within the next month or so, and will be contacting tribes in communities that we would like to visit. Again, the survey form itself will be mailed in early February. In the meantime, if you have questions about our project, please contact me (see below), or Dave Koster (david.koster@alaska.gov; 907-267-2371).

Sincerely,

James Fall
Statewide Program Manager
907-267-2359
jim.fall@alaska.gov

Enclosures: "Subsistence Harvests of Pacific Halibut in Alaska, 2008"; Technical Paper 348.

Appendix C.–Survey instrument.

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Fold on the dotted lines to mail in your survey



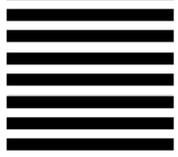
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SUBSISTENCE DIVISION
333 RASPBERRY RD
ANCHORAGE AK 99518-9961



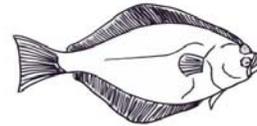
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Tape Closed

**SUBSISTENCE HALIBUT
HARVEST SURVEY 2009**
National Marine Fisheries Service &
AK Dept. Fish & Game/Division of Subsistence
(please make address changes as needed)



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SHARC Holder's Name		Date of Birth	
First Name	M.I.	Last Name	Mo. Day Year
Mailing Address			
Number and street or PO Box		City	State Zip code
Community of Residence		Daytime Telephone	SHARC Number
Tribe (if you are on a tribal role)			

Please answer each question to the best of your knowledge

1. Did you subsistence fish for halibut during 2009? (Please check one) Yes No

2. How many halibut did you harvest with set hook gear (long-line, skate) while subsistence fishing during 2009?
(*Set hook gear" is hook-and-line set with anchors and buoys. Please write in both the number and pounds of halibut. Pounds should be round (live) weight.)

2a. Number of halibut
 2b. Pounds of halibut
 2c. How many hooks did you usually set?
 2d. Water body, bay or sound usually fished

3. How many halibut did you harvest with hook-and-rod or hand-held lines while subsistence fishing during 2009?
(*Please write in both the number and pounds of halibut. Do not count fish reported in Question 6. Pounds should be round (live) weight.)

3a. Number of halibut
 3b. Pounds of halibut
 3c. Water body, bay or sound usually fished

4. How many lingcod and rockfish did you harvest while subsistence halibut fishing during 2009?
(*Please write in numbers of fish only.)

4a. Number of lingcod
 4b. Number of rockfish
 5. How many trips did you take to fish for subsistence halibut in 2009?
(*Please include trips where halibut was targeted but none were caught)

6. Did you sport fish for halibut during 2009? (Please check one) Yes No

7. How many halibut did you harvest while sport fishing during 2009?
(*Please write in both the number and pounds of halibut. Do not count fish reported in Question 3. Pounds should be round (live) weight.)

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

THANK YOU!

Please mail the completed survey to:
Subsistence Halibut Harvest Survey
Ak. Dept. Fish & Game/Div. of Subsistence
333 Raspberry Rd
Anchorage AK 99518-1599

QUESTIONS?

ADF&G 1-907-267-2353
NMFS at 1-800-304-4846 (option 2)
dfg.sub.halibut@alaska.gov

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

INSTRUCTIONS FOR SUBSISTENCE HALIBUT HARVEST SURVEY, 2009

TO AVOID FUTURE NOTIFICATIONS, PLEASE RESPOND NOW. WE NEED THIS INFORMATION BY MAY 15th. 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.

- DO NOT include all the lingcod and rockfish you harvested, but just those you harvested while subsistence halibut fishing.
- “Rockfish” means all fish of the genus *Sebastes*. These include fish with common English names such as red snapper, black bass, and sea bass.
- “Rockfish” DO NOT include sculpin, greenling, sablefish (black cod), tomcod, or Pacific cod. Please DO NOT include these other fish in your harvest estimates for rockfish.

Question 5. NEW!

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

Questions 6 and 7.

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

Do you still have questions?

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

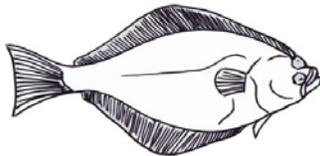
THANK YOU FOR PARTICIPATING IN THIS SURVEY!

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

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«CITY» «STATE» «ZIP»

**SUBSISTENCE HALIBUT HARVEST SURVEY 2009
NATIONAL MARINE FISHERIES SERVICE &
AK DEPT. OF FISH & GAME/DIVISION OF SUBSISTENCE**



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Appendix D.–Set of frequently asked questions and responses.

RAM: FAQ's for Subsistence Halibut Harvest Survey

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

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

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

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

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

3. Why do you need my birth date?

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

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

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

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

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

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

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

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

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

8. What is a lingcod?

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

9. What is a rockfish?

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

10. What is “sport fishing”?

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

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

- The survey is designed to prevent double-counting of harvested halibut. If you fish for halibut with a rod and reel and have a sport fishing license, you may include your harvests in Question 2 if you consider your activity to be subsistence fishing, or under Question 6 if you consider it sport fishing. **DO NOT INCLUDE THE SAME FISH IN YOUR 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

Appendix E-1.—Results from returned surveys.

Tribal name	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Angoon Community Association	2C	109	42	38.5%	16	38.1%	206	6017	2	4.8%	5	50	0	0	3	17
Aukquan Traditional Council	2C	1														
Central Council Tlingit And Haida Indian Tribes	2C	503	218	43.3%	75	34.4%	902	21892	46	21.1%	167	3072	5	29	20	115
Chilkat Indian Village	2C	23	18	78.3%	3	16.7%	20	328	2	11.1%	4	95	0	0	1	1
Chilkoot Indian Association	2C	48	27	56.3%	7	25.9%	46	1500	4	14.8%	6	195	0	0	0	0
Craig Community Association	2C	63	25	39.7%	12	48.0%	89	5260	2	8.0%	6	110	1	2	6	34
Douglas Indian Association	2C	16	4	25.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Hoonah Indian Association	2C	144	69	47.9%	23	33.3%	254	6612	4	5.8%	7	122	0	0	3	23
Hydaburg Cooperative Association	2C	123	106	86.2%	52	49.1%	575	26054	6	5.7%	7	450	16	86	29	617
Ketchikan Indian Corporation	2C	512	176	34.4%	55	31.3%	578	13610	43	24.4%	149	3184	9	47	18	155
Klawock Cooperative Association	2C	74	32	43.2%	8	25.0%	63	2800	1	3.1%	10	150	0	0	5	40
Metlakatla Indian Community, Annette Island Reserve	2C	178	70	39.3%	15	21.4%	51	1521	7	10.0%	7	190	2	10	2	3
Organized Village of Kake	2C	84	54	64.3%	20	37.0%	179	6782	1	1.9%	2	40	1	1	2	17
Organized Village of Kasaan	2C	9	4	44.4%	3	75.0%	22	580	1	25.0%	0	0	0	0	0	0
Organized Village of Saxman	2C	39	13	33.3%	10	76.9%	178	2125	2	15.4%	5	255	0	0	2	20
Petersburg Indian Association	2C	73	35	47.9%	13	37.1%	106	1925	6	17.1%	18	220	0	0	0	0
Sitka Tribe of Alaska	2C	288	164	56.9%	64	39.0%	402	11615	12	7.3%	35	315	21	69	26	212
Skagway Village	2C	4														
Wrangell Cooperative Association	2C	95	68	71.6%	30	44.1%	299	8982	13	19.1%	26	1365	1	2	6	38
Subtotal, Area 2C		2386	1128	47.3%	406	36.0%	3970	117603	152	13.5%	454	9813	56	246	123	1292
Kenaitze Indian Tribe	3A	118	55	46.6%	13	23.6%	211	5647	7	12.7%	28	555	0	0	1	2
Lesnoi Village (Woody Island)	3A	72	37	51.4%	6	16.2%	52	1805	4	10.8%	14	330	2	2	3	25
Native Village of Afognak	3A	24	14	58.3%	8	57.1%	40	1390	5	35.7%	28	885	0	0	0	0
Native Village of Akhiok	3A	12	4	33.3%	3	75.0%	20	695	1	25.0%	4	80	1	3	1	1
Native Village of Chenega	3A	18	4	22.2%	4	100.0%	11	415	4	100.0%	6	235	1	1	2	8
Native Village of Eyak	3A	79	39	49.4%	12	30.8%	63	1924	4	10.3%	5	110	1	1	2	9
Native Village of Karluk	3A	1														

-continued-

Appendix E-1.–Page 2 of 11.

Tribal name	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Native Village of Larsen Bay	3A	33	18	54.5%	15	83.3%	176	3905	6	33.3%	50	1205	5	80	5	136
Native Village of Nanwalek	3A	43	16	37.2%	16	100.0%	468	11585	1	6.3%	1	20	3	27	5	177
Native Village of Ouzinkie	3A	36	17	47.2%	9	52.9%	61	1960	3	17.6%	14	200	3	4	3	24
Native Village of Port Graham	3A	40	16	40.0%	14	87.5%	269	8494	4	25.0%	8	171	2	8	4	96
Native Village of Port Lions	3A	35	16	45.7%	11	68.8%	68	1572	4	25.0%	17	485	1	7	1	11
Native Village of Tatitlek	3A	23	12	52.2%	5	41.7%	51	1100	2	16.7%	10	0	1	2	2	2
Ninilchik Village	3A	82	34	41.5%	8	23.5%	239	4440	6	17.6%	36	946	0	0	0	0
Seldovia Village Tribe	3A	53	29	54.7%	16	55.2%	211	4345	8	27.6%	36	730	2	3	4	27
Shoonaq' Tribe of Kodiak	3A	133	68	51.1%	44	64.7%	743	24984	12	17.6%	63	1470	5	29	6	49
Village of Kanatak	3A	12	8	66.7%	2	25.0%	12	330	0	0.0%	0	0	2	3	2	5
Village of Old Harbor	3A	62	25	40.3%	16	64.0%	74	1960	3	12.0%	5	150	0	0	1	10
Village of Salamatoff	3A	23	15	65.2%	4	26.7%	51	1110	3	20.0%	5	210	0	0	0	0
Yakutat Tlingit Tribe	3A	38	23	60.5%	12	52.2%	190	4889	1	4.3%	12	500	4	20	2	20
Subtotal, Area 3A		937	451	48.1%	218	48.3%	3010	82550	78	17.3%	1062	8282	33	190	44	602
Agdaagux Tribe of King Cove	3B	69	34	49.3%	21	61.8%	140	4145	10	29.4%	24	610	3	21	5	69
Chignik Lake Village	3B	10	4	40.0%	3	75.0%	9	215	1	25.0%	0	0	0	0	0	0
Ivanoff Bay Village	3B	8	3	37.5%	1	33.3%	0	0	1	33.3%	5	300	1	1	1	1
Native Village of Belkofski	3B	4														
Native Village of Chignik	3B	7	6	85.7%	1	16.7%	2	30	0	0.0%	0	0	0	0	0	0
Native Village of Chignik Lagoon	3B	21	16	76.2%	12	75.0%	98	3463	2	12.5%	4	120	0	0	3	76
Native Village of False Pass	3B	1														
Native Village of Nelson Lagoon	3B	3														
Native Village of Perryville	3B	22	14	63.6%	8	57.1%	114	2910	3	21.4%	4	90	0	0	2	45
Native Village of Unga	3B	11	4	36.4%	3	75.0%	24	640	0	0.0%	0	0	0	0	0	0
Pauloff Harbor Village	3B	45	10	22.2%	4	40.0%	45	1260	2	20.0%	15	518	3	6	2	81
Qagan Toyagungin Tribe of Sand Point Village	3B	84	45	53.6%	22	48.9%	156	3965	3	6.7%	18	375	3	8	3	111
Subtotal, Area 3B		285	140	49.1%	76	54.3%	618	17078	22	15.7%	70	2013	10	36	16	383
Native Village of Akutan	4A	18	8	44.4%	4	50.0%	41	1900	0	0.0%	0	0	0	0	1	15
Qawalingin Tribe of Unalaska	4A	37	16	43.2%	4	25.0%	43	1031	4	25.0%	6	80	0	0	0	0
Subtotal, Area 4A		55	24	43.6%	8	33.3%	84	2931	4	16.7%	6	80	0	0	1	15
Native Village of Atka	4B	5														
Subtotal, Area 4B		5	3	60.0%	2	66.7%	49	770	1	33.3%	0	0	0	0	0	0

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Tribal name	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Pribilof Islands Aleut Community of St. George	4C	5														
Pribilof Islands Aleut Community of St. Paul	4C	44	13	29.5%	5	38.5%	130	6500	0	0.0%	0	0	0	0	0	0
Subtotal, Area 4C		49	15	30.6%	7	46.7%	147	6900	0	0.0%	0	0	1	2	1	5
Native Village of Diomedea (Inalik)	4D	1														
Native Village of Gambell	4D	1														
Native Village of Savoonga	4D	18	8	44.4%	3	37.5%	12	424	0	0.0%	0	0	0	0	0	0
Subtotal, Area 4D		20	10	50.0%	4	40.0%	24	599	0	0.0%	0	0	1	1	0	0
Chevak Native Village (Kashunamit)	4E	6	3	50.0%	3	100.0%	8	275	0	0.0%	0	0	0	0	0	0
Chinik Eskimo Community	4E	1														
Egegik Village	4E	1														
King Island Native Community	4E	1														
Levelock Village	4E	1														
Manokotak Village	4E	1														
Naknek Native Village	4E	9	1	11.1%	1	100.0%	0	0	0	0.0%	0	0	0	0	0	0
Native Village of Aleknagik	4E	6	3	50.0%	1	33.3%	2	60	0	0.0%	0	0	0	0	0	0
Native Village of Brevig Mission	4E	1														
Native Village of Council	4E	4														
Native Village of Dillingham (Curyung)	4E	16	7	43.8%	2	28.6%	4	180	4	57.1%	12	329	0	0	0	0
Native Village of Eek	4E	7	5	71.4%	4	80.0%	3	102	0	0.0%	0	0	0	0	0	0
Native Village of Goodnews Bay (Mumtraq)	4E	4														
Native Village of Hooper Bay	4E	18	5	27.8%	3	60.0%	39	530	1	20.0%	10	50	0	0	0	0
Native Village of Kakanak	4E	1														
Native Village of Kipnuk	4E	13	2	15.4%	1	50.0%	12	60	0	0.0%	0	0	0	0	0	0
Native Village of Kongiganak	4E	6	3	50.0%	2	66.7%	4	100	0	0.0%	0	0	0	0	0	0
Native Village of Koyuk	4E	1														
Native Village of Kwigillingok	4E	46	5	10.9%	3	60.0%	0	0	0	0.0%	0	0	0	0	0	0
Native Village of Kwinhagak	4E	4														

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Tribal name	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Native Village of Mekoryuk	4E	6	5	83.3%	4	80.0%	56	1392	1	20.0%	8	175	1	7	0	0
Native Village of Nightmute	4E	5														
Native Village of Port Heiden	4E	1														
Native Village of Scammon Bay	4E	5														
Native Village of Toksook Bay (Nunakauyak)	4E	33	12	36.4%	9	75.0%	164	1497	0	0.0%	0	0	0	0	0	0
Native Village of Tununak	4E	13	6	46.2%	3	50.0%	32	322	0	0.0%	0	0	0	0	0	0
Native Village of Unalakleet	4E	3														
Native Village of Wales	4E	1														
Newtok Village	4E	1														
Nome Eskimo Community	4E	15	4	26.7%	2	50.0%	28	830	0	0.0%	0	0	1	5	0	0
Orutsararmuit Native Village	4E	9	5	55.6%	1	20.0%	26	978	1	20.0%	3	110	0	0	0	0
South Naknek Village	4E	2														
Stebbins Community Association	4E	4														
Traditional Village of Togiak	4E	7	3	42.9%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Twin Hills Village	4E	1														
Ugashik Village	4E	2														
Village of Chefornak	4E	15	5	33.3%	1	20.0%	6	0	0	0.0%	0	0	0	0	0	0
Village of Clark's Point	4E	1														
Village of Kotlik	4E	1														
Subtotal, Area 4E		272	92	33.8%	50	54.3%	460	7652	10	10.9%	57	1134	3	16	1	20
Tribal name subtotals		4009	1863	46.5%	771	41.4%	8362	236083	267	14.3%	1649	21322	104	491	186	2317

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	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Rural community																
Angoon	2C	19	11	57.9%	6	54.5%	128	5035	4	36.4%	8	176	0	0	2	58
Coffman Cove	2C	55	43	78.2%	28	65.1%	190	4880	16	37.2%	126	2388	1	8	8	43
Craig	2C	417	252	60.4%	132	52.4%	1132	24862	85	33.7%	455	7583	45	119	70	590
Edna Bay	2C	47	27	57.4%	16	59.3%	66	2849	6	22.2%	14	380	3	15	3	35
Elfin Cove	2C	18	12	66.7%	4	33.3%	42	1635	2	16.7%	2	175	3	13	3	54
Gustavus	2C	83	55	66.3%	19	34.5%	153	4530	14	25.5%	73	1695	3	18	2	23
Haines	2C	470	367	78.1%	212	57.8%	996	28605	69	18.8%	60	1436	7	27	20	85
Hollis	2C	44	37	84.1%	23	62.2%	60	2982	8	21.6%	14	285	2	3	10	57
Hoonah	2C	119	81	68.1%	44	54.3%	393	8481	18	22.2%	143	2314	2	2	11	75
Hydaburg	2C	15	12	80.0%	10	83.3%	43	1749	6	50.0%	8	270	2	2	6	28
Hyder	2C	42	30	71.4%	16	53.3%	48	1913	3	10.0%	1	26	0	0	3	9
Kake	2C	43	26	60.5%	19	73.1%	135	4686	9	34.6%	10	470	0	0	6	51
Kasaan	2C	10	9	90.0%	6	66.7%	21	475	3	33.3%	1	60	0	0	2	21
Klawock	2C	146	101	69.2%	49	48.5%	519	12453	33	32.7%	188	3219	20	48	24	328
Klukwan	2C	2														
Metlakatla	2C	39	12	30.8%	6	50.0%	51	1105	2	16.7%	4	65	0	0	0	0
Meyers Chuck	2C	9	9	100.0%	7	77.8%	30	1235	0	0.0%	0	0	0	0	2	14
Naukati Bay	2C	24	19	79.2%	14	73.7%	55	2342	8	42.1%	31	1027	1	1	8	71
Pelican	2C	47	27	57.4%	15	55.6%	69	2116	3	11.1%	4	195	4	12	10	126
Petersburg	2C	958	655	68.4%	275	42.0%	1775	42933	158	24.1%	577	12266	10	30	38	178
Port Alexander	2C	32	19	59.4%	11	57.9%	119	4136	7	36.8%	2	37	7	26	9	126
Port Protection	2C	19	13	68.4%	10	76.9%	83	2678	3	23.1%	4	68	4	7	8	71
Pt. Baker	2C	16	12	75.0%	10	83.3%	34	944	2	16.7%	3	56	0	0	5	50
Saxman	2C	17	8	47.1%	2	25.0%	51	1125	2	25.0%	15	400	1	10	2	23
Sitka	2C	1446	982	67.9%	497	50.6%	2850	80576	172	17.5%	471	10656	221	646	258	2058
Skagway	2C	58	42	72.4%	21	50.0%	22	960	11	26.2%	8	156	0	0	1	2
Tenakee Springs	2C	51	46	90.2%	34	73.9%	210	5532	17	37.0%	42	937	1	1	15	85
Thorne Bay	2C	119	98	82.4%	55	56.1%	389	13257	30	30.6%	66	1937	12	51	30	245
Whale Pass	2C	25	21	84.0%	10	47.6%	49	2805	5	23.8%	5	300	0	0	2	22
Wrangell	2C	414	302	72.9%	179	59.3%	1417	39407	82	27.2%	185	4983	14	59	38	331
Subtotal, Area 2C		4804	3330	69.3%	1730	52.0%	11130	306286	778	23.4%	2520	53560	363	1098	596	4859
Akhiok	3A	1														
Chenega Bay	3A	7	7	100.0%	5	71.4%	62	1740	4	57.1%	30	689	2	10	4	58
Cordova	3A	536	364	67.9%	151	41.5%	881	21949	80	22.0%	207	4988	15	35	27	169
Kodiak	3A	1687	947	56.1%	485	51.2%	4994	136196	345	36.4%	1933	51892	63	226	89	904
Larsen Bay	3A	10	6	60.0%	2	33.3%	0	0	1	16.7%	12	600	0	0	0	0
Nanwalek	3A	11	6	54.5%	6	100.0%	253	7370	0	0.0%	0	0	2	22	2	74
Old Harbor	3A	17	10	58.8%	9	90.0%	44	1180	1	10.0%	10	200	0	0	0	0
Ouzinkie	3A	25	12	48.0%	6	50.0%	24	835	2	16.7%	3	130	0	0	1	4
Port Graham	3A	12	7	58.3%	5	71.4%	97	2170	1	14.3%	0	0	1	12	1	10
Port Lions	3A	17	7	41.2%	5	71.4%	20	510	4	57.1%	10	230	0	0	0	0

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	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Rural community																
Seldovia	3A	164	119	72.6%	71	59.7%	1106	24409	43	36.1%	254	5362	6	21	9	85
Tatitlek	3A	11	5	45.5%	3	60.0%	42	820	1	20.0%	3	45	0	0	0	0
Yakutat	3A	75	50	66.7%	30	60.0%	310	7165	10	20.0%	65	1610	12	72	5	82
Subtotal, Area 3A		2573	1541	59.9%	779	50.6%	7835	204384	493	32.0%	2529	65786	101	398	138	1386
Chignik	3B	4														
Chignik Lagoon	3B	1														
Chignik Lake	3B	4														
Cold Bay	3B	22	20	90.9%	12	60.0%	152	3830	9	45.0%	27	725	3	205	2	14
False Pass	3B	2														
King Cove	3B	27	22	81.5%	15	68.2%	102	3026	4	18.2%	0	0	1	2	4	24
Nelson Lagoon	3B	1														
Perryville	3B	1														
Sand Point	3B	22	10	45.5%	5	50.0%	67	1375	2	20.0%	19	340	0	0	2	40
Subtotal, Area 3B		84	59	70.2%	34	57.6%	330	8626	15	25.4%	46	1065	4	207	8	78
Akutan	4A	1														
Nikolski	4A	2														
Unalaska	4A	127	77	60.6%	39	50.6%	438	10931	23	29.9%	72	1612	5	34	7	84
Subtotal, Area 4A		130	78	60.0%	40	51.3%	452	12056	23	29.5%	72	1612	5	34	8	96
Adak	4B	26	13	50.0%	2	15.4%	1	50	1	7.7%	0	0	0	0	0	0
Atka	4B	2														
Subtotal, Area 4B		28	14	50.0%	3	21.4%	13	170	1	7.1%	0	0	0	0	0	0
St. George Island	4C	1														
St. Paul Island	4C	2														
Subtotal, Area 4C		3	1	33.3%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Aleknagik	4E	2														
Bethel	4E	3														
Chefornak	4E	1														
Dillingham	4E	41	24	58.5%	1	4.2%	0	0	2	8.3%	0	0	0	0	0	0
Egegik	4E	1														
Hooper Bay	4E	1														
King Salmon	4E	2														
Kongiganak	4E	1														
Manokotak	4E	1														
Mekoryuk	4E	1														
Naknek	4E	4														
Nightmute	4E	2														
Nome	4E	21	13	61.9%	5	38.5%	34	1130	0	0.0%	0	0	1	5	0	0
Port Heiden	4E	3														
Quinhagak	4E	2														
South Naknek	4E	1														

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Rural community	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Teller	4E	10	6	60.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Togiak	4E	2														
Toksook Bay	4E	1														
White Mountain	4E	2														
Subtotal, Area 4E		102	58	56.9%	11	19.0%	53	1411	3	5.2%	0	0	2	7	0	0
Rural community subtotals		7,724	5,081	65.8%	2,597	51.1%	19,813	532,933	1,313	25.8%	5,167	122,023	475	1,744	750	6,419
Tribal/rural totals		11,733	6,944	59.2%	3,368	48.5%	28,175	769,016	1,580	22.8%	6,816	143,345	579	2,235	936	8,736

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City of residence	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Adak	AK	26	11	42.3%	3	27.3%	7	290	1	9.1%	0	0	0	0	1	2
Akhiok	AK	10	4	40.0%	4	100.0%	22	735	1	25.0%	2	40	1	3	1	1
Akiachak	AK	1														
Akutan	AK	17	7	41.2%	4	57.1%	41	1,900	0	0.0%	0	0	0	0	1	15
Aleknagik	AK	3														
Anchor Point	AK	9	2	22.2%	1	50.0%	20	400	1	50.0%	8	150	0	0	0	0
Anchorage	AK	218	101	46.3%	30	29.7%	400	12,683	23	22.8%	90	2,084	6	19	7	110
Angoon	AK	129	51	39.5%	22	43.1%	334	11,052	6	11.8%	13	226	0	0	5	75
Atka	AK	3														
Auke Bay	AK	5														
Barrow	AK	1	1	100.0%	1	100.0%	35	1,500	0	0.0%	0	0	1	3	0	0
Bethel	AK	13	6	46.2%	1	16.7%	0	0	0	0.0%	0	0	0	0	0	0
Chefornak	AK	15	5	33.3%	1	20.0%	6	0	0	0.0%	0	0	0	0	0	0
Cheneg Bay	AK	8	6	75.0%	4	66.7%	41	1,370	3	50.0%	15	580	1	3	3	34
Chevak	AK	5														
Chignik	AK	13	11	84.6%	2	18.2%	6	230	0	0.0%	0	0	0	0	0	0
Chignik Lagoon	AK	13	10	76.9%	7	70.0%	61	2,425	2	20.0%	4	120	0	0	3	76
Chignik Lake	AK	8	4	50.0%	2	50.0%	4	125	0	0.0%	0	0	0	0	0	0
Chiniak	AK	21	12	57.1%	10	83.3%	103	3,708	2	16.7%	3	110	1	1	0	0
Chugiak	AK	4														
Clarks Point	AK	1														
Coffman Cove	AK	50	40	80.0%	27	67.5%	184	4,700	12	30.0%	71	1,445	1	8	8	43
Cold Bay	AK	24	22	91.7%	13	59.1%	152	3,830	9	40.9%	21	641	3	205	2	14
Cordova	AK	599	398	66.4%	161	40.5%	924	23,173	82	20.6%	171	3,958	15	35	29	178
Craig	AK	547	325	59.4%	175	53.8%	1,455	38,072	102	31.4%	480	7,856	53	134	95	754
Dillingham	AK	46	24	52.2%	0	0.0%	0	0	2	8.3%	0	0	0	0	0	0
Douglas	AK	17	4	23.5%	2	50.0%	30	520	2	50.0%	4	45	0	0	0	0
Dutch Harbor	AK	83	45	54.2%	20	44.4%	246	6,490	17	37.8%	62	1,342	1	10	5	82
Eagle River	AK	4														
Edna Bay	AK	28	21	75.0%	13	61.9%	56	2,293	4	19.0%	13	230	3	15	3	35
Eek	AK	6	4	66.7%	3	75.0%	3	102	0	0.0%	0	0	0	0	0	0
Egegik	AK	1														
Elfin Cove	AK	17	11	64.7%	4	36.4%	42	1,635	2	18.2%	2	175	3	13	3	54
Ester	AK	1														
Fairbanks	AK	4														
False Pass	AK	3														
Fritz Creek	AK	1														
Gakona	AK	1														
Gambell	AK	1														
Girdwood	AK	1														
Golovin	AK	1														

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City of residence	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Goodnews Bay	AK	4														
Gustavus	AK	81	53	65.4%	19	35.8%	153	4,530	13	24.5%	55	1,404	3	18	2	23
Haines	AK	528	406	76.9%	219	53.9%	1,056	30,076	68	16.7%	41	1,091	7	29	19	70
Hollis	AK	1														
Homer	AK	25	14	56.0%	9	64.3%	226	3,878	5	35.7%	34	680	3	11	1	20
Hoonah	AK	262	151	57.6%	68	45.0%	703	16,043	21	13.9%	140	2,336	2	2	14	98
Hooper Bay	AK	17	6	35.3%	4	66.7%	39	530	1	16.7%	10	50	0	0	0	0
Hydaburg	AK	119	110	92.4%	54	49.1%	605	27,279	10	9.1%	15	720	18	88	32	631
Hyder	AK	40	30	75.0%	16	53.3%	48	1,913	3	10.0%	1	26	0	0	3	9
Juneau	AK	338	123	36.4%	40	32.5%	408	8,934	32	26.0%	145	2,710	1	2	8	33
Kake	AK	127	80	63.0%	38	47.5%	308	11,268	10	12.5%	12	510	1	1	8	68
Kasaan	AK	15	9	60.0%	6	66.7%	40	955	2	22.2%	1	60	0	0	2	21
Kasilof	AK	13	4	30.8%	2	50.0%	39	475	1	25.0%	9	250	0	0	0	0
Kenai	AK	105	47	44.8%	9	19.1%	170	5,370	6	12.8%	18	454	1	4	2	22
Ketchikan	AK	598	228	38.1%	93	40.8%	968	22,998	67	29.4%	243	5,861	11	52	33	277
King Cove	AK	86	45	52.3%	32	71.1%	204	5,531	10	22.2%	18	505	4	23	8	91
King Salmon	AK	2														
Kipnuk	AK	12	2	16.7%	1	50.0%	12	60	0	0.0%	0	0	0	0	0	0
Klawock	AK	232	138	59.5%	55	39.9%	533	15,250	30	21.7%	173	3,209	16	39	25	327
Klukwan	AK	1														
Kodiak	AK	1,826	1,017	55.7%	532	52.3%	5,423	147,609	357	35.1%	1,985	53,317	66	284	98	1,026
Kongiganak	AK	7	3	42.9%	2	66.7%	4	100	0	0.0%	0	0	0	0	0	0
Kotzebue	AK	2														
Kwigillingok	AK	45	5	11.1%	3	60.0%	0	0	0	0.0%	0	0	0	0	0	0
Larsen Bay	AK	34	18	52.9%	13	72.2%	137	3,030	7	38.9%	62	1,805	3	20	3	76
Manokotak	AK	1														
Mekoryuk	AK	6	5	83.3%	5	100.0%	74	1,663	0	0.0%	0	0	2	9	0	0
Metlakatla	AK	207	78	37.7%	20	25.6%	96	2,426	8	10.3%	7	135	2	10	1	1
Meyers Chuck	AK	9	9	100.0%	7	77.8%	30	1,235	0	0.0%	0	0	0	0	2	14
Naknek	AK	9	4	44.4%	2	50.0%	0	0	1	25.0%	0	0	0	0	0	0
Nanwalek	AK	51	21	41.2%	21	100.0%	716	18,805	1	4.8%	1	20	5	49	7	251
Naukati	AK	19	11	57.9%	7	63.6%	19	1,017	4	36.4%	2	177	0	0	3	52
Nelson Lagoon	AK	1														
Newtok	AK	1														
Nightmute	AK	7	1	14.3%	1	100.0%	20	180	0	0.0%	0	0	0	0	0	0
Nikiski	AK	10	7	70.0%	4	57.1%	96	2,200	4	57.1%	16	630	0	0	0	0
Nikolski	AK	2														
Ninilchik	AK	41	16	39.0%	3	18.8%	102	1,525	3	18.8%	16	471	0	0	0	0
Nome	AK	25	15	60.0%	6	40.0%	46	1,305	0	0.0%	0	0	2	6	0	0
North Pole	AK	4														
Old Harbor	AK	64	27	42.2%	24	88.9%	114	3,090	4	14.8%	15	350	0	0	1	10

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City of residence	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Ouzinkie	AK	59	30	50.8%	15	50.0%	72	2,770	5	16.7%	17	330	4	27	4	28
Palmer	AK	12	4	33.3%	1	25.0%	1	60	1	25.0%	12	310	0	0	0	0
Pelican	AK	54	31	57.4%	18	58.1%	90	3,141	4	12.9%	6	230	6	34	12	150
Perryville	AK	20	12	60.0%	7	58.3%	112	2,880	2	16.7%	4	90	0	0	2	45
Petersburg	AK	1,041	706	67.8%	292	41.4%	1,939	46,118	167	23.7%	613	12,876	11	32	40	182
Pilot Point	AK	2														
Point Baker	AK	22	16	72.7%	14	87.5%	69	1,789	3	18.8%	4	78	2	4	9	77
Port Alexander	AK	30	17	56.7%	12	70.6%	123	4,336	5	29.4%	2	37	8	27	10	141
Port Graham	AK	47	20	42.6%	16	80.0%	205	4,536	4	20.0%	6	111	1	12	3	25
Port Heiden	AK	2														
Port Lions	AK	49	19	38.8%	13	68.4%	74	1,582	8	42.1%	27	715	1	7	1	11
Port Protection	AK	2														
Port William	AK	2														
Quinhagak	AK	6	2	33.3%		100.0%	0	0	0	0.0%	0	0	0	0	0	0
Sand Point	AK	137	59	43.1%	32	54.2%	282	7,030	7	11.9%	52	1,233	5	12	7	232
Savoonga	AK	17	7	41.2%	3	42.9%	12	424	0	0.0%	0	0	0	0	0	0
Saxman	AK	12	2	16.7%	1	50.0%	5	150	0	0.0%	0	0	0	0	1	10
Scammon Bay	AK	1														
Seldovia	AK	165	112	67.9%	68	60.7%	1,000	22,444	39	34.8%	228	4,602	7	23	10	88
Seward	AK	15	11	73.3%	3	27.3%	5	305	0	0.0%	0	0	0	0	0	0
Sitka	AK	1,731	1,152	66.6%	568	49.3%	3,276	92,549	183	15.9%	486	10,501	244	724	285	2,272
Skagway	AK	64	47	73.4%	22	46.8%	30	1,060	12	25.5%	8	156	0	0	1	2
Soldotna	AK	39	20	51.3%	9	45.0%	133	1,960	4	20.0%	26	480	0	0	2	4
South Naknek	AK	2														
St. George Island	AK	3														
St. Paul Island	AK	44	15	34.1%	6	40.0%	175	7,100	0	0.0%	0	0	0	0	0	0
Sterling	AK	5														
Tatitlek	AK	17	6	35.3%	3	50.0%	32	1,300	0	0.0%	0	0	0	0	0	0
Teller	AK	10	6	60.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Tenakee Springs	AK	51	46	90.2%	34	73.9%	210	5,532	17	37.0%	42	937	1	1	15	85
Thorne Bay	AK	115	99	86.1%	57	57.6%	402	14,177	30	30.3%	68	2,077	12	51	31	249
Togiak	AK	9	4	44.4%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Toksook Bay	AK	33	13	39.4%	10	76.9%	165	1,507	0	0.0%	0	0	0	0	0	0
Trapper Creek	AK	1														
Tununak	AK	11	6	54.5%	3	50.0%	32	322	0	0.0%	0	0	0	0	0	0
Twin Hills	AK	2														
Unalakleet	AK	1														
Unalaska	AK	81	51	63.0%	27	52.9%	524	17,642	10	19.6%	16	350	4	24	2	2
Valdez	AK	37	21	56.8%	13	61.9%	102	1,962	6	28.6%	19	280	3	4	5	12
Ward Cove	AK	28	9	32.1%	2	22.2%	7	114	2	22.2%	2	159	0	0	0	0
Wasilla	AK	33	12	36.4%	3	25.0%	42	1,600	0	0.0%	0	0	1	2	1	4

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Appendix E-1.–Page 11 of 11.

City of residence	Regulatory area	Return rate			Subsistence fished		Subsistence harvest		Sport fished		Sport harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent returned	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Percent respondents	Number halibut	Pounds halibut*	Number respondents	Number lingcod	Number respondents	Number rockfish
Waterfall	AK	1														
Whale Pass	AK	8	8	100.0%	6	75.0%	27	1,030	0	0.0%	0	0	0	0	0	0
Whittier	AK	3														
Willow	AK	2														
Wrangell	AK	530	381	71.9%	214	56.2%	1,748	49,427	96	25.2%	214	6,221	14	59	45	369
Yakutat	AK	109	68	62.4%	41	60.3%	465	10,554	10	14.7%	65	1,610	15	89	7	102
Subtotal, AK		11,600	6,871	59.2%	3,365	49.0%	28,163	768,618	1,563	22.7%	5,910	139,566	579	2,235	935	8,728
Subtotal, non-Alaska residents		133	73	54.9%	3	4.1%	12	398	17	23.3%	186	3,779	0	0	1	8
City of residence totals		11,733	6,944	59.2%	3,368	48.5%	28,175	769,016	1,580	22.8%	6,096	143,345	579	2,235	936	8,736

*Pounds of halibut are reported in round weight.

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.

Appendix E-2.—Harvests by return category.

Tribal name	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished
Angoon Community Association	2C	27	12	154	5.7	12.8	15	4	52	3.5	13.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Aukquan Traditional Council	2C	0																			
Central Council Tlingit and Haida Indian Tribes	2C	165	66	788	4.8	11.9	49	9	114	2.3	12.7	0	0	0	0.0	0.0	4	0	0	0.0	0.0
Chilkat Indian Village	2C	15	2	18	1.2	9.0	3	1	2	0.7	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chilkoot Indian Association	2C	22	6	26	1.2	4.3	5	1	20	4.0	20.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Craig Community Association	2C	19	9	53	2.8	5.9	4	1	8	2.0	8.0	0	0	0	0.0	0.0	2	2	28	14.0	14.0
Douglas Indian Association	2C	2																			
Hoonah Indian Association	2C	59	19	169	2.9	8.9	10	4	85	8.5	21.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hydaburg Cooperative Association	2C	31	16	63	2.0	3.9	5	4	143	28.6	35.8	0	0	0	0.0	0.0	70	32	369	5.3	11.5
Ketchikan Indian Corporation	2C	144	42	468	3.3	11.1	31	12	104	3.4	8.7	0	0	0	0.0	0.0	1	1	6	6.0	6.0
Klawock Cooperative Association	2C	29	6	59	2.0	9.8	3	2	4	1.3	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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Tribal name	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished
Metlakatla Indian Community, Annette Island Reserve	2C	53	9	42	0.8	4.7	16	6	9	0.6	1.5	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Organized Village of Kake	2C	39	14	113	2.9	8.1	15	6	66	4.4	11.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Organized Village of Kasaan	2C	4																			
Organized Village of Saxman	2C	9	7	162	18.0	23.1	4	3	16	4.0	5.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Petersburg Indian Association	2C	22	8	90	4.1	11.3	13	5	16	1.2	3.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Sitka Tribe of Alaska	2C	81	36	229	2.8	6.4	21	10	54	2.6	5.4	0	0	0	0.0	0.0	62	18	119	1.9	6.6
Skagway Village Wrangell Cooperative Association	2C	2																			
Subtotal, Area 2C		781	283	2,729	3.5	9.6	207	70	719	3.5	10.3	0	0	0	0.0	0.0	140	53	522	3.7	9.8
Kenaitze Indian Tribe	3A	40	10	178	4.5	17.8	15	3	33	2.2	11.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Lesnoi Village (Woody Island)	3A	30	6	52	1.7	8.7	7	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Afognak	3A	9	8	40	4.4	5.0	5	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Akhiok	3A	3																			

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Tribal name	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished
Native Village of Chenega	3A	3																			
Native Village of Eyak	3A	33	10	47	1.4	4.7	6	2	16	2.7	8.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Karluk	3A	1																			
Native Village of Larsen Bay	3A	11	10	152	13.8	15.2	7	5	24	3.4	4.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Nanwalek	3A	8	8	203	25.4	25.4	8	8	265	33.1	33.1	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Ouzinkie	3A	17	9	61	3.6	6.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Port Graham	3A	10	10	253	25.3	25.3	5	4	16	3.2	4.0	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Native Village of Port Lions	3A	11	10	64	5.8	6.4	5	1	4	0.8	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Tatitlek	3A	10	5	51	5.1	10.2	2	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Seldovia	3A	25	8	239	9.6	29.9	7	0	0	0.0	0.0	0	0	0	0.0	0.0	2	0	0	0.0	0.0
Shoonaq' Tribe of Kodiak	3A	22	11	163	7.4	14.8	7	5	48	6.9	9.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Kanatak	3A	54	39	641	11.9	16.4	13	5	102	7.8	20.4	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Native Village of Old Harbor	3A	8	2	12	1.5	6.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
	3A	16	9	43	2.7	4.8	9	7	31	3.4	4.4	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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Tribal name	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished
Village of Salamatoff	3A	13	2	33	2.5	16.5	2	2	18	9.0	9.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Yakutat Tlingit Tribe	3A	15	8	164	10.9	20.5	8	4	26	3.3	6.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 3A		339	170	2,408	7.1	14.2	108	48	602	5.6	12.5	0	0	0	0.0	0.0	4	0	0	0.0	0.0
Agdaagux Tribe of King Cove	3B	28	16	130	4.6	8.1	6	5	10	1.7	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chignik Lake Village	3B	3																			
Ivanoff Bay Village Native	3B	2																			
Village of Belkofski Native	3B	0																			
Village of Chignik Native	3B	4																			
Village of Chignik Lagoon Native	3B	15	11	94	6.3	8.5	1	1	4	4.0	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Village of False Pass Native	3B	0																			
Village of Nelson Lagoon Native	3B	1																			
Village of Perryville Native	3B	11	7	102	9.3	14.6	3	1	12	4.0	12.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Village of Unga	3B	4																			
Pauloff Harbor Village	3B	7	2	7	1.0	3.5	3	2	38	12.7	19.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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Tribal name	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those all returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all returned	Mean, those who fished
Qagan Toyagungin Tribe of Sand Point Village	3B	37	18	130	3.5	7.2	8	4	26	3.3	6.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 3B		112	60	493	4.4	8.2	28	16	125	4.5	7.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Akutan	4A	7	4	41	5.9	10.3	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Qawalingin Tribe of Unalaska	4A	12	4	43	3.6	10.8	3	0	0	0.0	0.0	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Subtotal, Area 4A		19	8	84	4.4	10.5	4	0	0	0.0	0.0	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Native Village of Atka	4B	2																			
Subtotal, Area 4B		2	1	45	22.5	45.0	1	1	4	4.0	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Pribilof Islands Aleut Community of St. George	4C	2																			
Pribilof Islands Aleut Community of St. Paul	4C	5																			
Subtotal, Area 4C		7	5	120	17.1	24.0	8	2	27	3.4	13.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Diomedes (Inalik)	4D	1																			
Native Village of Gambell	4D	0																			
Native Village of Savoonga	4D	8	3	12	1.5	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 4D		9	4	24	2.7	6.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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Tribal name	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished
Chevak Native Village (Kashunamiut)	4E	3																			
Chinik Eskimo Community	4E	1																			
Egegik Village	4E	0																			
King Island Native Community	4E	0																			
Levelock Village	4E	0																			
Manokotak Village	4E	0																			
Naknek Native Village	4E	1																			
Native Village of Aleknagik	4E	2																			
Native Village of Brevig Mission	4E	0																			
Native Village of Council	4E	1																			
Native Village of Dillingham (Curyung)	4E	6	2	4	0.7	2.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Native Village of Eek	4E	2																			

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Tribal name	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished
Native Village of Goodnews Bay (Mumtraq)	4E	0																			
Native Village of Hooper Bay	4E	4																			
Native Village of Kanakanak	4E	1																			
Native Village of Kipnuk	4E	2																			
Native Village of Kongiganak	4E	3																			
Native Village of Koyuk	4E	0																			
Native Village of Kwigillingok	4E	1																			
Native Village of Kwinhagak	4E	1																			
Native Village of Mekoryuk	4E	3																			
Native Village of Nightmute	4E	1																			
Native Village of Port Heiden	4E	0																			

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Tribal name	Reg. area	First mailing response				Second mailing response				Third mailing response				Staff administered			
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those all who returned fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned fished
Native Village of Scammon Bay	4E	2															
Native Village of Toksook Bay (Nunakauyak)	4E	5															
Native Village of Tununak	4E	5															
Native Village of Unalakleet	4E	1															
Native Village of Wales	4E	1															
Newtok Village	4E	1															
Nome Eskimo Community	4E	4															
Orutsararmuit Native Village	4E	4															
South Naknek Village	4E	0															
Stebbins Community Association	4E	0															
Traditional Village of Togiak	4E	2															
Twin Hills Village	4E	0															
Ugashik Village	4E	1															

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Tribal name	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished
Village of Chefornek	4E	0																			
Village of Clark's Point	4E	1																			
Village of Kotlik	4E	1																			
Subtotal, Area 4E		60	31	288	4.8	9.3	32	19	172	5.4	9.1	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Tribal name subtotals		1,329	562	6,191	4.7	11.0	389	156	1,649	4.2	10.6	0	0	0	0.0	0.0	145	53	522	3.6	9.8

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Rural community	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished
Angoon	2C	9	6	128	14.2	21.3	2	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Coffman Cove	2C	37	24	178	4.8	7.4	6	4	12	2.0	3.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Craig	2C	204	111	961	4.7	8.7	48	21	171	3.6	8.1	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Edna Bay	2C	20	13	63	3.2	4.8	7	3	3	0.4	1.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Elfin Cove	2C	11	4	42	3.8	10.5	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Gustavus	2C	47	15	132	2.8	8.8	8	4	21	2.6	5.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Haines	2C	317	190	912	2.9	4.8	50	22	84	1.7	3.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hollis	2C	31	18	52	1.7	2.9	6	5	8	1.3	1.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hoonah	2C	75	40	358	4.8	9.0	6	4	35	5.8	8.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hydaburg	2C	9	9	33	3.7	3.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0	3	1	10	3.3	10.0
Hyder	2C	25	14	41	1.6	2.9	5	2	7	1.4	3.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Kake	2C	21	14	107	5.1	7.6	5	5	28	5.6	5.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Kasaan	2C	6	4	16	2.7	4.0	3	2	5	1.7	2.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Klawock	2C	75	43	479	6.4	11.1	26	6	40	1.5	6.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Klukwan	2C	2																			
Metlakatla	2C	7	3	25	3.6	8.3	5	3	26	5.2	8.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Meyers Chuck	2C	9	7	30	3.3	4.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Naukati Bay	2C	17	14	55	3.2	3.9	2	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Pelican	2C	27	15	69	2.6	4.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Petersburg	2C	459	194	1,187	2.6	6.1	195	81	588	3.0	7.3	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Port Alexander	2C	14	9	89	6.4	9.9	5	2	30	6.0	15.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Protection	2C	12	10	83	6.9	8.3	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Pt. Baker	2C	9	7	26	2.9	3.7	3	3	8	2.7	2.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Saxman	2C	6	1	16	2.7	16.0	2	1	35	17.5	35.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Sitka	2C	693	379	2,070	3.0	5.5	129	65	448	3.5	6.9	0	0	0	0.0	0.0	160	52	332	2.1	6.4
Skagway	2C	36	19	22	0.6	1.2	6	2	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Tenakee Springs	2C	42	30	180	4.3	6.0	4	4	30	7.5	7.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Thorne Bay	2C	85	47	358	4.2	7.6	11	6	23	2.1	3.8	0	0	0	0.0	0.0	2	2	8	4.0	4.0
Whale Pass	2C	18	9	43	2.4	4.8	3	1	6	2.0	6.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Wrangell	2C	255	155	1,251	4.9	8.1	46	23	158	3.4	6.9	0	0	0	0.0	0.0	1	1	8	8.0	8.0
Subtotal, Area 2C		2,578	1,404	9,006	3.5	6.4	585	269	1,766	3.0	6.6	0	0	0	0.0	0.0	167	56	358	2.1	6.4

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Rural community	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished
Akhiok	3A	1																			
Chenega Bay	3A	7	5	62	8.9	12.4	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Cordova	3A	310	134	770	2.5	5.7	53	17	111	2.1	6.5	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Kodiak	3A	754	412	4,246	5.6	10.3	191	71	692	3.6	9.7	0	0	0	0.0	0.0	2	2	56	28.0	28.0
Larsen Bay	3A	5																			
Nanwalek	3A	4																			
Old Harbor	3A	7	6	30	4.3	5.0	3	3	14	4.7	4.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ouzinkie	3A	9	5	17	1.9	3.4	3	1	7	2.3	7.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Graham	3A	6	5	97	16.2	19.4	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Lions	3A	5																			
Seldovia	3A	100	59	1,013	10.1	17.2	16	12	93	5.8	7.8	0	0	0	0.0	0.0	3	0	0	0.0	0.0
Tatitlek	3A	4																			
Yakutat	3A	36	21	240	6.7	11.4	14	9	70	5.0	7.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 3A		1,248	661	6,782	5.4	10.3	287	116	997	3.5	8.6	0	0	0	0.0	0.0	6	2	56	9.3	28.0
Chignik	3B	2																			
Chignik Lagoon	3B	1																			
Chignik Lake	3B	2																			
Cold Bay	3B	17	10	137	8.1	13.7	3	2	15	5.0	7.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
False Pass	3B	0																			
King Cove	3B	16	11	65	4.1	5.9	6	4	37	6.2	9.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Nelson Lagoon	3B	0																			
Perryville	3B	0																			
Sand Point	3B	6	4	53	8.8	13.3	4	1	14	3.5	14.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 3B		44	26	259	5.9	10.0	15	8	71	4.7	8.9	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Akutan	4A	0																			
Nikolski	4A	1																			
Unalaska	4A	58	31	271	4.7	8.7	19	8	167	8.8	20.9	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, Area 4A		59	32	285	4.8	8.9	19	8	167	8.8	20.9	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Adak	4B	10	2	1	0.1	0.5	3	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Atka	4B	1																			
Subtotal, Area 4B		11	3	13	1.2	4.3	3	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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Rural community	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all who returned	Mean, those who fished
St. George Island	4C	0																			
St. Paul Island	4C	1																			
Subtotal, Area 4C		1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Aleknagik	4E	2																			
Bethel	4E	1																			
Chefornak	4E	0																			
Dillingham	4E	22	1	0	0.0	0.0	2	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Egegik	4E	0																			
Hooper Bay	4E	0																			
King Salmon	4E	2																			
Kongiganak	4E	0																			
Manokotak	4E	0																			
Mekoryuk	4E	1																			
Naknek	4E	3																			
Nightmute	4E	0																			
Nome	4E	12	5	34	2.8	6.8	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Heiden	4E	0																			
Quinhagak	4E	1																			
South Naknek	4E	0																			
Teller	4E	5																			
Togiak	4E	1																			
Toksook Bay	4E	1																			
White Mountain	4E	0																			
Subtotal, Area 4E		51	10	53	1.0	5.3	7	1	0	0.4	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Rural community subtotals		3,992	2,136	16,398	4.1	7.7	916	402	3,001	0.4	7.5	0	0	0	0.0	0.0	173	58	414	2.4	7.1
Tribal-rural total		5,321	2,698	22,589	4.2	8.4	1,305	558	4,650	3.6	8.3	0	0	0	0.0	0.0	318	111	936	2.9	8.4

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City of residence	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished
Adak	AK	11	3	7	0.6	2.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Akhiok	AK	3																			
Akiachak	AK	1																			
Akutan	AK	6	4	41	6.8	10.3	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Aleknagik	AK	2																			
Anchor Point	AK	2																			
Anchorage	AK	81	26	378	4.7	14.5	19	4	22	1.2	5.5	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Angoon	AK	35	18	282	8.1	15.7	16	4	52	3.3	13.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Atka	AK	1																			
Auke Bay	AK	2																			
Barrow	AK	1																			
Bethel	AK	4																			
Chefornak	AK	0																			
Cheneg Bay	AK	6	4	41	6.8	10.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chevak	AK	3																			
Chignik	AK	8	2	6	0.8	3.0	3	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chignik Lagoon	AK	9	6	57	6.3	9.5	1	1	4	4.0	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chignik Lake	AK	4	2	4	1.0	2.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chiniak	AK	12	10	103	8.6	10.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Chugiak	AK	3																			
Clarks Point	AK	1																			
Coffman Cove	AK	34	23	172	5.1	7.5	6	4	12	2.0	3.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Cold Bay	AK	17	11	137	8.1	12.5	5	2	15	3.0	7.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Cordova	AK	338	142	797	2.4	5.6	59	19	127	2.2	6.7	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Craig	AK	261	144	1224	4.7	8.5	62	29	203	3.3	7.0	0	0	0	0.0	0.0	2	2	28	14.0	14.0
Dillingham	AK	21	0	0	0.0	0.0	3	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Douglas	AK	3																			
Dutch Harbor	AK	31	17	158	5.1	9.3	14	3	88	6.3	29.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Eagle River	AK	3																			
Edna Bay	AK	15	10	53	3.5	5.3	6	3	3	0.5	1.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Eek	AK	1																			
Egegik	AK	0																			
Elfin Cove	AK	10	4	42	4.2	10.5	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ester	AK	1																			

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City of residence	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished
Fairbanks	AK	3																			
False Pass	AK	0																			
Fritz Creek	AK	1																			
Gakona	AK	0																			
Gambell	AK	0																			
Girdwood	AK	1																			
Golovin	AK	1																			
Goodnews Bay	AK	0																			
Gustavus	AK	46	15	132	2.9	8.8	7	4	21	3.0	5.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Haines	AK	345	194	948	2.7	4.9	61	25	108	1.8	4.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hollis	AK	0																			
Homer	AK	14	9	226	16.1	25.1	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hoonah	AK	135	61	598	4.4	9.8	16	7	105	6.6	15.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Hooper Bay	AK	4																			
Hydaburg	AK	32	17	83	2.6	4.9	5	4	143	28.6	35.8	0	0	0	0.0	0.0	73	33	379	5.2	11.5
Hyder	AK	25	14	41	1.6	2.9	5	2	7	1.4	3.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Juneau	AK	99	36	374	3.8	10.4	23	4	34	1.5	8.5	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Kake	AK	60	27	214	3.6	7.9	20	11	94	4.7	8.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Kasaan	AK	6	4	35	5.8	8.8	3	2	5	1.7	2.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Kasilof	AK	2																			
Kenai	AK	35	6	112	3.2	18.7	12	3	58	4.8	19.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ketchikan	AK	188	78	818	4.4	10.5	40	15	150	3.8	10.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
King Cove	AK	34	23	157	4.6	6.8	11	9	47	4.3	5.2	0	0	0	0.0	0.0	0	0	0	0.0	0.0
King Salmon	AK	2																			
Kipnuk	AK	2																			
Klawock	AK	105	48	490	4.7	10.2	33	7	43	1.3	6.1	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Klukwan	AK	1																			
Kodiak	AK	808	451	4566	5.7	10.1	207	79	801	3.9	10.1	0	0	0	0.0	0.0	2	2	56	28.0	28.0
Kongiganak	AK	3																			
Kotzebue	AK	2																			
Kwigillingok	AK	1																			
Larsen Bay	AK	11	8	113	10.3	14.1	7	5	24	3.4	4.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Manokotak	AK	0																			
Mekoryuk	AK	3																			
Metlakatla	AK	57	11	61	1.1	5.5	21	9	35	1.7	3.9	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Meyers Chuck	AK	9	7	30	3.3	4.3	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Naknek	AK	4																			
Nanwalek	AK	12	12	450	37.5	37.5	9	9	266	29.6	29.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0

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City of residence	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those returned	Mean, those who fished
Naukati	AK	10	7	19	1.9	2.7	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Nelson Lagoon	AK	1																			
Newtok	AK	1																			
Nightmute	AK	1																			
Nikiski	AK	6	3	96	16.0	32.0	1	1	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Nikolski	AK	1																			
Ninilchik	AK	13	3	102	7.8	34.0	2	0	0	0.0	0.0	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Nome	AK	14	6	46	3.3	7.7	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
North Pole	AK	0																			
Old Harbor	AK	17	15	73	4.3	4.9	10	9	41	4.1	4.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ouzinkie	AK	26	14	65	2.5	4.6	4	1	7	1.8	7.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Palmer	AK	3																			
Pelican	AK	31	18	90	2.9	5.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Perryville	AK	9	6	100	11.1	16.7	3	1	12	4.0	12.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Petersburg	AK	492	203	1297	2.6	6.4	213	89	642	3.0	7.2	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Pilot Point	AK	0																			
Point Baker	AK	13	11	61	4.7	5.5	3	3	8	2.7	2.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Alexander	AK	14	10	93	6.6	9.3	3	2	30	10.0	15.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Graham	AK	14	12	189	13.5	15.8	6	4	16	2.7	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Heiden	AK	0																			
Port Lions	AK	14	12	70	5.0	5.8	5	1	4	0.8	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Port Protection	AK	1																			
Port William	AK	1																			
Quinhagak	AK	2																			
Sand Point	AK	48	27	209	4.4	7.7	11	5	73	6.6	14.6	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Savoonga	AK	7	3	12	1.7	4.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Saxman	AK	1																			
Scammon Bay	AK	0																			
Seldovia	AK	94	56	890	9.5	15.9	15	12	110	7.3	9.2	0	0	0	0.0	0.0	3	0	0	0.0	0.0
Seward	AK	11	3	5	0.5	1.7	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Sitka	AK	772	421	2317	3.0	5.5	152	75	502	3.3	6.7	0	0	0	0.0	0.0	228	71	457	2.0	6.4
Skagway	AK	40	20	30	0.8	1.5	7	2	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Soldotna	AK	12	4	78	6.5	19.5	8	5	55	6.9	11.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
South Naknek	AK	0																			

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Appendix E-2.–Page 15 of 15.

City of residence	Reg. area	First mailing response					Second mailing response					Third mailing response					Staff administered				
		Number returned ^a	Number subs. fished	Number of halibut harv.	Mean, those all returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all returned	Mean, those who fished	Number returned	Number subs. fished	Number of halibut harv.	Mean, those all returned	Mean, those who fished
St. George Island	AK	2																			
St. Paul Island	AK	7	4	148	21.1	37.0	8	2	27	3.4	13.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Sterling	AK	3																			
Tatitlek	AK	4																			
Teller	AK	5																			
Tenakee Springs	AK	42	30	180	4.3	6.0	4	4	30	7.5	7.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Thorne Bay	AK	86	49	371	4.3	7.6	11	6	23	2.1	3.8	0	0	0	0.0	0.0	2	2	8	4.0	4.0
Togiak	AK	3																			
Toksook Bay	AK	6	4	94	15.7	23.5	7	6	71	10.1	11.8	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Trapper Creek	AK	1																			
Tununak	AK	5																			
Twin Hills	AK	0																			
Unalakleet	AK	0																			
Unalaska	AK	41	21	441	10.8	21.0	9	6	83	9.2	13.8	0	0	0	0.0	0.0	1	0	0	0.0	0.0
Valdez	AK	19	12	93	4.9	7.8	2	1	9	4.5	9.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Ward Cove	AK	9	2	7	0.8	3.5	0	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Wasilla	AK	11	3	42	3.8	14.0	1	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Waterfall	AK	0																			
Whale Pass	AK	7	5	21	3.0	4.2	1	1	6	6.0	6.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Whittier	AK	1																			
Willow	AK	1																			
Wrangell	AK	320	187	1548	4.8	8.3	60	26	192	3.2	7.4	0	0	0	0.0	0.0	1	1	8	8.0	8.0
Yakutat	AK	46	28	369	8.0	13.2	22	13	96	4.4	7.4	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Subtotal, AK		5269	2695	22577	4.3	8.4	1284	558	4650	3.6	8.3	0	0	0	0.0	0.0	318	111	936	2.9	8.4
Subtotal, non-Alaska residents		52	3	12	0.2	4.0	21	0	0	0.0	0.0	0	0	0	0.0	0.0	0	0	0	0.0	0.0
City of residence totals		5,321	2,698	22,589	5.4	8.4	1,305	558	4,650	3.6	8.3	0	0	0	0.0	0.0	318	111	936	2.9	8.4

a. To protect confidentiality, data for tribes and communities with 5 or fewer surveys returned are not reported in this table. Subtotals include all tribes and communities.

Appendix E-3.—Estimated subsistence harvests of halibut by gear type.

Tribal name	Regulatory area	Number of SHARCs issued ^a	Set hook gear			Hook & line or handline			All gear				
			Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Angoon Community Association	2C	109	30	466	9,881	14	48	654	40	514	46.3%	10,534	52.3%
Aukquan Traditional Council	2C	1											
Central Council Tlingit And Haida Indian Tribes	2C	503	147	1,553	28,216	80	419	5,911	166	1,972	22.9%	34,127	36.8%
Chilkat Indian Village	2C	23	4	26	293	0	0	0	4	26	62.5%	293	55.0%
Chilkoot Indian Association	2C	48	12	73	1,767	2	7	61	12	80	68.9%	1,828	66.9%
Craig Community Association	2C	63	28	190	7,315	5	33	1,890	30	223	48.5%	9,205	60.4%
Douglas Indian Association	2C	16	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Hoonah Indian Association	2C	144	39	396	6,857	23	142	2,680	47	538	43.4%	9,537	37.7%
Hydaburg Cooperative Association	2C	123	60	581	18,229	18	80	2,712	61	661	17.7%	20,941	14.1%
Ketchikan Indian Corporation	2C	512	124	911	17,877	81	650	7,876	148	1,561	42.1%	25,754	33.2%
Klawock Cooperative Association	2C	74	7	81	3,658	12	65	894	19	146	82.7%	4,552	93.6%
Metlakatla Indian Community, Annette Island Reserve	2C	178	20	69	1,137	20	69	1,850	38	138	52.4%	2,987	56.6%
Organized Village of Kake	2C	84	30	273	7,068	5	5	119	30	277	35.0%	7,188	33.5%
Organized Village of Kasaan	2C	9	6	36	630	4	8	182	6	44	208.4%	812	198.0%
Organized Village of Saxman	2C	39	20	421	2,959	14	85	1,275	28	507	97.3%	4,234	37.7%
Petersburg Indian Association	2C	73	22	134	2,151	12	78	812	26	212	46.7%	2,963	41.0%
Sitka Tribe of Alaska	2C	288	93	564	11,887	31	136	1,991	109	700	25.0%	13,878	22.7%
Skagway Village	2C	4											
Wrangell Cooperative Association	2C	95	38	360	7,202	22	56	1,541	42	416	22.5%	8,743	23.0%
Subtotal, Area 2C		2,386	680	6,133	127,129	343	1,881	30,449	807	8,014	11.3%	157,578	11.6%
Kenaitze Indian Tribe	3A	118	13	123	1,085	17	318	7,646	27	442	51.6%	8,732	77.6%
Lesnoi Village (Woody Island)	3A	72	11	76	1,947	6	23	444	11	98	63.2%	2,390	66.1%
Native Village of Afognak	3A	24	13	57	1,233	3	8	339	13	65	67.7%	1,572	65.4%
Native Village of Akhiok	3A	12	0	0	0	7	45	1,095	7	45	119.3%	1,095	147.9%
Native Village of Chenega	3A	18	17	30	816	13	17	660	17	47	224.3%	1,476	230.2%
Native Village of Eyak	3A	79	22	99	2,172	16	26	485	24	124	44.7%	2,657	53.1%
Native Village of Karluk	3A	1											
Native Village of Larsen Bay	3A	33	18	216	3,189	17	106	1,822	28	323	42.2%	5,011	42.2%
Native Village of Nanwalek	3A	43	14	294	5,317	11	180	2,862	16	474	34.7%	8,180	51.2%
Native Village of Ouzinkie	3A	36	19	103	2,382	10	23	448	19	126	44.5%	2,830	45.3%
Native Village of Port Graham	3A	40	24	187	5,580	28	312	5,325	34	499	69.9%	10,905	89.8%
Native Village of Port Lions	3A	35	17	92	1,983	7	62	1,482	24	154	36.5%	3,465	36.2%
Native Village of Tatitlek	3A	23	8	50	1,417	6	48	1,149	10	98	61.8%	2,566	63.2%
Ninilchik Village	3A	82	5	95	1,506	16	446	6,250	18	541	58.7%	7,756	60.3%
Seldovia Village Tribe	3A	53	17	202	3,247	25	196	2,559	30	399	39.2%	5,806	36.0%
Shoonaq' Tribe of Kodiak	3A	133	78	1,096	26,066	33	281	6,264	82	1,376	36.6%	32,330	41.3%
Village of Kanatak	3A	12	3	18	347	0	0	0	3	18	117.8%	347	128.4%
Village of Old Harbor	3A	62	19	63	1,366	20	93	1,780	38	156	42.7%	3,146	49.1%
Village of Salamatoff	3A	23	1	0	0	6	73	1,110	6	73	61.0%	1,110	66.0%

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Tribal name	Regulatory area	Number of SHARCs issued ^a	Set hook gear			Hook & line or handline			All gear				
			Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut harvested	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Yakutat Tlingit Tribe	3A	38	18	283	5,183	7	28	417	20	311	47.2%	5,600	54.4%
Subtotal, Area 3A		937	316	3,084	64,837	245	2,284	42,136	426	5,368	15.2%	106,972	18.9%
Agdaagux Tribe of King Cove	3B	69	12	86	2,436	29	202	3,448	41	288	39.6%	5,884	40.0%
Chignik Lake Village	3B	10	2	7	79	7	24	260	7	30	88.0%	339	95.4%
Ivanoff Bay Village	3B	8	3	0	0	3	0	0	3	0	0.0%	0	0.0%
Native Village of Belkofski	3B	4											
Native Village of Chignik	3B	7	0	0	0	1	2	25	1	2	104.9%	25	104.9%
Native Village of Chignik Lagoon	3B	21	8	63	1,666	13	60	1,488	15	123	29.2%	3,154	33.3%
Native Village of False Pass	3B	1											
Native Village of Nelson Lagoon	3B	3											
Native Village of Perryville	3B	22	13	160	2,871	6	19	330	13	179	43.1%	3,201	45.7%
Native Village of Unga	3B	11	2	2	56	4	46	840	6	48	154.8%	896	144.5%
Pauloff Harbor Village	3B	45	9	81	1,575	18	122	2,394	18	203	129.6%	3,969	120.3%
Qagan Toyagungin Tribe of Sand Point Village	3B	84	15	84	2,200	31	200	3,049	40	284	35.0%	5,249	43.4%
Subtotal, Area 3B		285	63	482	10,883	115	795	13,092	147	1,277	18.9%	23,975	20.4%
Native Village of Akutan	4A	18	5	99	1,733	7	47	1,260	9	146	82.9%	2,993	75.9%
Qawalingin Tribe of Unalaska	4A	37	7	77	1,110	5	26	622	10	103	73.5%	1,732	76.8%
Subtotal, Area 4A		55	12	176	2,843	12	74	1,882	19	249	53.1%	4,725	52.8%
Native Village of Atka	4B	5											
Subtotal, Area 4B		5	2	5	117	3	77	782	3	82	267.9%	898	211.6%
Pribilof Islands Aleut Community of St. George	4C	5											
Pribilof Islands Aleut Community of St. Paul	4C	44	11	295	4,702	4	28	1,878	15	323	94.6%	6,580	149.1%
Subtotal, Area 4C		49	14	308	4,964	7	58	2,316	20	366	81.5%	7,280	136.7%
Native Village of Diomed (Inalik)	4D	1											
Native Village of Gambell	4D	1											
Native Village of Savoonga	4D	18	5	20	362	2	7	306	7	27	120.9%	668	108.3%
Subtotal, Area 4D		20	6	32	485	2	7	306	8	39	91.3%	790	78.2%
Chevak Native Village (Kashunamiut)	4E	6	0	0	0	3	8	193	3	8	181.6%	193	168.7%
Chinik Eskimo Community	4E	1											
Egegik Village	4E	1											
King Island Native Community	4E	1											
Levelock Village	4E	1											
Manokotak Village	4E	1											
Naknek Native Village	4E	9	7	0	0	7	0	0	7	0	0.0%	0	0.0%
Native Village of Aleknagik	4E	6	2	4	84	0	0	0	2	4	333.3%	84	333.3%
Native Village of Brevig Mission	4E	1											
Native Village of Council	4E	4											
Native Village of Dillingham (Curyung)	4E	16	0	0	0	4	9	270	4	9	122.3%	270	123.4%
Native Village of Eek	4E	7	1	0	0	6	4	100	6	4	106.9%	100	98.7%
Native Village of Goodnews Bay (Mumtraq)	4E	4											

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Tribal name	Regulatory area	Number of SHARCs issued ^a	Set hook gear			Hook & line or handline			All gear				
			Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Native Village of Hooper Bay	4E	18	3	64	672	10	61	515	10	125	213.0%	1,187	200.2%
Native Village of Kakanak	4E	1											
Native Village of Kipnuk	4E	13	0	0	0	7	78	273	7	78	1216.5%	273	1216.5%
Native Village of Kongiganak	4E	6	0	0	0	3	7	117	3	7	333.3%	117	333.3%
Native Village of Koyuk	4E	1											
Native Village of Kwigillingok	4E	46	10	0	0	31	0	0	31	0	0.0%	0	0.0%
Native Village of Kwinhagak	4E	4											
Native Village of Mekoryuk	4E	6	5	61	1,001	1	6	168	5	67	41.7%	1,169	53.0%
Native Village of Nightmute	4E	5											
Native Village of Port Heiden	4E	1											
Native Village of Scammon Bay	4E	5											
Native Village of Toksook Bay (Nunakauyak)	4E	33	3	48	266	9	116	782	9	164	67.2%	1,048	59.7%
Native Village of Tununak	4E	13	0	0	0	7	69	488	7	69	120.1%	488	112.9%
Native Village of Unalakleet	4E	3											
Native Village of Wales	4E	1											
Newtok Village	4E	1											
Nome Eskimo Community	4E	15	8	68	1,391	4	38	788	8	105	243.5%	2,179	212.2%
Orutsararmuit Native Village	4E	9	2	40	970	2	7	262	2	47	196.3%	1,232	196.3%
South Naknek Village	4E	2											
Stebbins Community Association	4E	4											
Traditional Village of Togiak	4E	7	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Twin Hills Village	4E	1											
Ugashik Village	4E	2											
Village of Cheforak	4E	15	0	0	0	3	18	250	3	18	234.7%	250	234.7%
Village of Clark's Point	4E	1											
Village of Kotlik	4E	1											
Subtotal, Area 4E		272	46	327	4,994	109	465	4,734	120	793	33.5%	9,728	33.6%
Tribal name totals	All	4,009	1,137	10,547	216,251	837	5,640	95,696	1,549	16,187	8.2%	311,947	9.7%

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	Regulatory area	Set hook gear			Hook & line or handline			All gear					
		Number of SHARCs issued ^a	Estimated number respondents fished	Estimated number halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Rural community													
Angoon	2C	19	5	59	7	143	4,522	9	202	81.5%	5,614	100.8%	
Coffman Cove	2C	55	27	128	14	114	1,598	34	242	20.5%	4,448	16.1%	
Craig	2C	417	182	1,389	85	467	6,204	213	1,856	13.3%	28,820	12.3%	
Edna Bay	2C	47	23	92	4	4	143	23	96	40.1%	2,913	31.1%	
Elfin Cove	2C	18	5	43	3	10	359	5	53	80.1%	1,431	91.4%	
Gustavus	2C	83	15	156	15	52	1,000	26	209	50.5%	4,328	60.9%	
Haines	2C	470	263	1,197	71	135	2,585	266	1,332	10.8%	26,770	9.3%	
Hollis	2C	44	24	59	10	9	174	26	69	19.0%	2,386	21.9%	
Hoonah	2C	119	53	401	20	130	1,828	59	531	17.9%	8,086	17.9%	
Hydaburg	2C	15	10	42	3	4	130	11	47	37.3%	1,325	39.0%	
Hyder	2C	42	20	59	10	6	132	20	65	31.0%	1,766	29.0%	
Kake	2C	43	23	170	11	16	436	26	186	31.4%	4,436	39.8%	
Kasaan	2C	10	7	24	3	0	0	7	24	45.3%	380	41.6%	
Klawock	2C	146	52	415	38	297	3,504	69	712	18.1%	11,592	24.7%	
Klukwan	2C	2											
Metlakatla	2C	39	12	93	12	60	914	18	153	91.8%	2,321	80.5%	
Meyers Chuck	2C	9	6	25	4	5	98	7	30	0.0%	865	0.0%	
Naukati Bay	2C	24	18	56	8	14	411	18	69	27.7%	2,071	26.0%	
Pelican	2C	47	14	70	17	28	594	21	98	45.3%	2,108	46.6%	
Petersburg	2C	958	296	1,528	206	950	15,011	383	2,478	8.9%	41,890	8.3%	
Port Alexander	2C	32	18	186	5	8	210	18	194	41.7%	4,732	53.7%	
Port Protection	2C	19	11	104	5	10	319	12	113	42.9%	2,307	39.5%	
Pt. Baker	2C	16	12	41	1	3	69	13	44	33.4%	869	31.3%	
Saxman	2C	17	4	24	4	89	1,239	4	112	126.4%	1,768	129.2%	
Sitka	2C	1,446	662	3,517	230	549	9,144	717	4,066	6.9%	82,246	6.7%	
Skagway	2C	58	26	25	10	4	201	28	29	38.4%	896	40.5%	
Tenakee Springs	2C	51	32	171	16	57	798	37	228	10.3%	4,339	11.0%	
Thorne Bay	2C	119	57	313	25	147	3,100	65	459	13.7%	10,964	12.9%	
Whale Pass	2C	25	6	32	8	28	1,286	12	60	32.9%	2,338	29.4%	
Wrangell	2C	414	207	1,459	95	394	6,972	234	1,853	10.2%	36,149	10.2%	
Subtotal, Area 2C		4,804	2,087	11,878	938	3,732	62,979	2,381	15,610	3.6%	300,156	3.7%	
Akhiok	3A	1											
Chenega Bay	3A	7	3	32	4	30	483	5	62	0.0%	1,218	0.0%	
Cordova	3A	536	180	915	89	319	5,196	212	1,234	12.1%	21,657	11.9%	
Kodiak	3A	1,687	664	6,159	402	2,382	44,778	835	8,541	7.5%	162,767	7.9%	
Larsen Bay	3A	10	0	0	4	0	0	4	0	0.0%	0	0.0%	
Nanwalek	3A	11	4	224	3	29	294	6	253	136.7%	5,159	143.4%	
Old Harbor	3A	17	6	38	12	35	817	13	72	66.3%	1,297	41.9%	
Ouzinkie	3A	25	2	13	6	16	339	8	29	59.8%	689	66.7%	
Port Graham	3A	12	1	36	6	103	1,470	7	139	81.2%	2,170	77.6%	

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	Regulatory area	Set hook gear				Hook & line or handline			All gear				
		Number of SHARCs issued ^a	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Rural community													
Port Lions	3A	17	10	61	945	2	5	95	10	66	59.9%	1,040	71.3%
Seldovia	3A	164	46	539	9,146	67	932	13,703	94	1,471	13.6%	22,850	15.2%
Tatitlek	3A	11	7	90	1,103	2	5	189	7	95	153.7%	1,292	111.7%
Yakutat	3A	75	30	312	4,603	15	147	2,705	42	460	22.0%	7,308	21.4%
Subtotal, Area 3A		2,573	953	8,418	157,376	613	4,005	70,097	1,244	12,423	6.4%	227,473	6.9%
Chignik	3B	4											
Chignik Lagoon	3B	1											
Chignik Lake	3B	4											
Cold Bay	3B	22	13	156	2,550	8	13	446	13	170	17.6%	2,996	18.1%
False Pass	3B	2											
King Cove	3B	27	6	22	484	16	94	1,923	17	116	32.0%	2,407	34.2%
Nelson Lagoon	3B	1											
Sand Point	3B	22	5	16	188	7	119	1,675	9	135	101.5%	1,863	100.8%
Subtotal, Area 3B		84	25	196	3,245	32	233	4,298	41	430	22.9%	7,543	22.9%
Akutan	4A	1											
Nikolski	4A	2											
Unalaska	4A	127	41	355	6,620	42	321	5,269	60	677	22.5%	11,888	23.4%
Subtotal, Area 4A		130	41	355	6,620	43	335	6,056	61	691	22.1%	12,676	23.7%
Adak	4B	26	1	0	0	2	1	41	2	1	157.1%	41	157.1%
Atka	4B	2											
Subtotal, Area 4B		28	1	0	0	4	25	209	4	25	143.2%	209	115.7%
St. George Island	4C	1											
St. Paul Island	4C	2											
Subtotal, Area 4C		3	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Subtotal, Area 4D		0	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Aleknagik	4E	2											
Bethel	4E	3											
Chefornak	4E	1											
Dillingham	4E	41	0	0	0	5	0	0	5	0	0.0%	0	0.0%
Egegik	4E	1											
Hooper Bay	4E	1											
King Salmon	4E	2											
Kongiganak	4E	1											
Manokotak	4E	1											
Mekoryuk	4E	1											
Naknek	4E	4											
Nightmute	4E	2											
Nome	4E	21	7	50	1,159	2	0	0	7	50	67.9%	1,159	67.2%
Port Heiden	4E	3											
Quinhagak	4E	2											

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	Regulatory area	Number of SHARCs issued ^a	Set hook gear			Hook & line or handline			All gear				
			Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Estimated pounds halibut harvested	Estimated number respondents fished	Estimated number halibut harvested	Confidence interval for number of halibut	Estimated pounds halibut harvested	Confidence interval for pounds of halibut
Rural community													
South Naknek	4E	1											
Teller	4E	10	0	0	0	0	0	0	0	0	0.0%	0	0.0%
Togiak	4E	2											
Toksook Bay	4E	1											
White Mountain	4E	2											
Subtotal, Area 4E		102	10	55	1,204	11	14	151	17	69	62.3%	1,355	60.5%
Rural community totals	All	7,724	3,118	20,903	405,622	1,642	8,345	143,790	3,748	29,247	3.3%	549,412	3.4%
Tribal name subtotals													
Tribal name subtotals	All	4,009	1,137	10,547	216,251	837	5,640	95,696	1,549	16,187	8.2%	311,947	9.7%
Rural community subtotals	All	7,724	3,118	20,903	405,622	1,642	8,345	143,790	3,748	29,247	3.3%	549,412	3.4%
Totals	All	11,733	4,255	31,450	621,873	2,479	13,984	239,486	5,296	45,434	3.3%	861,359	3.7%
Tribal name subtotals													
2C		7,190	2,767	18,011	364,306	1,281	5,613	93,428	3,187	23,624	3.9%	457,734	4.0%
3A		3,510	1,269	11,502	222,213	858	6,289	112,233	1,669	17,791	6.1%	334,446	7.1%
3B		369	87	679	14,128	148	1,028	17,390	189	1,707	15.2%	31,518	15.9%
4A		185	53	531	9,463	55	409	7,938	79	940	20.7%	17,400	21.9%
4B		33	3	5	117	8	102	991	8	107	110.3%	1,107	97.8%
4C		52	14	308	4,964	7	58	2,316	20	366	81.5%	7,280	135.8%
4D		20	6	32	485	2	7	306	8	39	91.3%	790	78.2%
4E		374	56	382	6,198	121	479	4,885	137	861	29.9%	11,083	29.3%
Totals	All	11,733	4,255	31,450	621,873	2,479	13,984	239,486	5,296	45,434	3.3%	861,359	3.7%

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.

Appendix E-4.—Estimated subsistence harvests of halibut by place of residence.

City	State	Number of SHARCs issued ^a	Subsistence fished	Subsistence harvest		Sport fished	Sport harvest		Lingcod bycatch		Rockfish bycatch	
			Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number lingcod	Estimated number respondents	Estimated number rockfish
Adak	AK	26	4	13	377	1	0	0	0	0	2	4
Akhiok	AK	10	8	47	1,123	1	2	28	2	7	2	2
Akiachak	AK	1										
Akutan	AK	17	9	146	2,993	0	0	0	0	0	2	34
Aleknagik	AK	3										
Anchor Point	AK	9	2	38	529	2	18	238	0	0	0	0
Anchorage	AK	218	52	618	12,991	42	143	2,602	10	26	12	133
Angoon	AK	129	49	715	16,148	11	25	284	0	0	10	135
Atka	AK	3										
Auke Bay	AK	5										
Barrow	AK	1										
Bethel	AK	13	1	0	0	0	0	0	0	0	0	0
Chefornak	AK	15	3	18	250	0	0	0	0	0	0	0
Chenega Bay	AK	8	4	41	959	3	15	406	1	3	3	34
Chevak	AK	5										
Chignik	AK	13	3	10	283	0	0	0	0	0	0	0
Chignik Lagoon	AK	13	9	75	2,233	3	5	105	0	0	4	95
Chignik Lake	AK	8	5	19	197	0	0	0	0	0	0	0
Chiniak	AK	21	18	184	4,571	3	5	129	2	2	0	0
Chugiak	AK	4										
Clarks Point	AK	1										
Coffman Cove	AK	50	32	235	4,299	14	84	1,193	1	9	10	53
Cold Bay	AK	24	15	170	2,996	11	23	501	3	229	2	16
Cordova	AK	599	234	1,322	23,364	118	239	3,868	23	51	41	253
Craig	AK	547	284	2,500	48,930	158	752	8,734	89	224	154	1,209
Dillingham	AK	46	0	0	0	5	0	0	0	0	0	0
Douglas	AK	17	4	65	787	4	9	68	0	0	0	0
Dutch Harbor	AK	83	30	375	6,912	26	95	1,440	2	15	8	124
Eagle River	AK	4										
Edna Bay	AK	28	19	82	2,341	6	19	235	4	22	4	51
Eek	AK	6	4	4	100	0	0	0	0	0	0	0
Egegik	AK	1										
Elfin Cove	AK	17	5	53	1,431	3	3	153	4	16	4	68
Ester	AK	1										
Fairbanks	AK	4										
False Pass	AK	3										
Fritz Creek	AK	1										
Gakona	AK	1										
Gambell	AK	1										
Girdwood	AK	1										

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City	State	Number of SHARCs issued ^a	Subsistence fished	Subsistence harvest		Sport fished	Sport harvest		Lingcod bycatch		Rockfish bycatch	
			Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number lingcod	Estimated number respondents	Estimated number rockfish
Golovin	AK	1										
Goodnews Bay	AK	4										
Gustavus	AK	81	26	209	4,328	18	75	1,348	4	25	3	32
Haines	AK	528	286	1,485	29,635	85	52	983	10	39	24	87
Hollis	AK	1										
Homer	AK	25	19	479	7,561	10	55	767	8	33	3	51
Hoonah	AK	262	109	1,199	19,085	31	192	2,281	3	3	21	148
Hooper Bay	AK	17	11	125	1,187	3	32	112	0	0	0	0
Hydaburg	AK	119	63	693	21,853	11	17	566	21	101	36	723
Hyder	AK	40	20	65	1,766	4	1	22	0	0	4	11
Juneau	AK	338	82	842	12,689	66	300	3,909	2	4	17	71
Kake	AK	127	54	454	11,407	14	17	483	2	2	12	98
Kasaan	AK	15	9	62	1,052	3	1	48	0	0	2	24
Kasilof	AK	13	3	79	629	2	19	378	0	0	0	0
Kenai	AK	105	16	325	7,444	11	37	658	1	4	3	24
Ketchikan	AK	598	208	2,383	36,944	151	553	8,975	27	137	71	621
King Cove	AK	86	50	328	5,995	17	36	707	7	44	13	161
King Salmon	AK	2										
Kipnuk	AK	12	7	78	273	0	0	0	0	0	0	0
Klawock	AK	232	83	785	15,906	43	258	3,249	23	53	38	483
Klukwan	AK	1										
Kodiak	AK	1,826	923	9,346	177,769	619	3,407	64,034	113	490	168	1,770
Kongiganak	AK	7	3	7	117	0	0	0	0	0	0	0
Kotzebue	AK	2										
Kwigillingok	AK	45	31	0	0	0	0	0	0	0	0	0
Larsen Bay	AK	34	24	251	3,889	13	116	2,386	6	37	6	139
Manokotak	AK	1										
Mekoryuk	AK	6	6	85	1,359	0	0	0	2	10	0	0
Metlakatla	AK	207	54	276	4,950	21	20	262	5	26	3	3
Meyers Chuck	AK	9	7	30	865	0	0	0	0	0	2	14
Naknek	AK	9	8	0	0	1	0	0	0	0	0	0
Nanwalek	AK	51	21	722	13,234	1	1	14	5	49	7	251
Naukati	AK	19	9	25	951	5	3	177	0	0	4	66
Nelson Lagoon	AK	1										
Newtok	AK	1										
Nightmute	AK	7	1	20	126	0	0	0	0	0	0	0
Nikiski	AK	10	5	125	2,007	6	22	597	0	0	0	0
Nikolski	AK	2										
Ninilchik	AK	41	7	231	3,135	7	36	747	0	0	0	0
Nome	AK	25	8	62	1,281	0	0	0	3	9	0	0

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City	State	Number of SHARCs issued ^a	Subsistence fished	Subsistence harvest		Sport fished	Sport harvest		Lingcod bycatch		Rockfish bycatch	
			Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number lingcod	Estimated number respondents	Estimated number rockfish
North Pole	AK	4										
Old Harbor	AK	64	49	221	4,376	15	37	644	0	0	2	19
Ouzinkie	AK	59	26	127	3,433	9	33	420	8	53	8	55
Palmer	AK	12	2	2	91	2	24	434	0	0	0	0
Pelican	AK	54	28	144	3,659	8	10	247	10	65	19	231
Perryville	AK	20	11	176	3,168	3	6	99	0	0	3	71
Petersburg	AK	1,041	418	2,816	46,766	247	898	13,619	17	49	59	284
Pilot Point	AK	2										
Point Baker	AK	22	18	87	1,597	4	5	67	2	5	12	103
Port Alexander	AK	30	19	199	4,907	8	3	43	13	45	16	219
Port Graham	AK	47	35	412	6,426	9	15	197	1	17	6	52
Port Heiden	AK	2										
Port Lions	AK	49	28	190	3,754	16	56	1,055	2	15	2	24
Port Protection	AK	2										
Port William	AK	2										
Quinhagak	AK	6	4	0	0	0	0	0	0	0	0	0
Sand Point	AK	137	70	654	11,759	19	145	2,665	17	38	18	653
Savoonga	AK	17	7	27	668	0	0	0	0	0	0	0
Saxman	AK	12	3	14	299	0	0	0	0	0	3	28
Scammon Bay	AK	1										
Seldovia	AK	165	93	1,372	21,708	53	309	4,430	10	31	14	117
Seward	AK	15	6	9	376	0	0	0	0	0	0	0
Sitka	AK	1,731	844	4,834	97,424	265	699	10,516	357	1,071	416	3,298
Skagway	AK	64	30	43	1,018	16	11	146	0	0	1	3
Soldotna	AK	39	18	307	3,473	8	55	719	0	0	4	8
South Naknek	AK	2										
St. George Island	AK	3										
St. Paul Island	AK	44	16	398	7,280	0	0	0	0	0	0	0
Sterling	AK	5										
Tatitlek	AK	17	6	63	1,814	0	0	0	0	0	0	0
Teller	AK	10	0	0	0	0	0	0	0	0	0	0
Tenakee Springs	AK	51	37	228	4,339	18	45	710	1	1	16	92
Thorne Bay	AK	115	67	474	11,663	35	80	1,701	14	60	37	294
Togiak	AK	9	0	0	0	0	0	0	0	0	0	0
Toksook Bay	AK	33	10	165	1,055	0	0	0	0	0	0	0
Trapper Creek	AK	1										
Tununak	AK	11	7	69	488	0	0	0	0	0	0	0
Twin Hills	AK	2										
Unalakleet	AK	1										
Unalaska	AK	81	46	937	22,394	19	30	421	7	37	4	4

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City	State	Number of SHARCs issued ^a	Subsistence fished	Subsistence harvest		Sport fished	Sport harvest		Lingcod bycatch		Rockfish bycatch	
			Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number halibut	Estimated pounds halibut	Estimated number respondents	Estimated number lingcod	Estimated number respondents	Estimated number rockfish
Valdez	AK	37	33	235	4,778	19	51	1,315	8	10	14	42
Ward Cove	AK	28	6	20	226	5	5	300	0	0	0	0
Wasilla	AK	33	6	81	2,169	0	0	0	2	3	2	6
Waterfall	AK	1										
Whale Pass	AK	8	7	33	959	0	0	0	0	0	0	0
Whittier	AK	3										
Willow	AK	2										
Wrangell	AK	530	287	2,358	46,668	136	339	6,806	18	77	61	488
Yakutat	AK	109	60	713	11,190	15	91	1,570	21	127	10	146
Subtotals, AK		11,600	5,290	45,413	860,834	2,503	9,663	161,383	900	3,390	1,425	13,296
Non-Alaska subtotals		133	6	22	525	25	275	3,935	0	0	2	19
Totals		11,733	5,296	45,434	861,359	2,528	9,938	165,318	900	3,390	1,427	13,315

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.

Appendix E-5.—Estimated subsistence harvests of halibut by gear type and place of residence.

City	State	Number of SHARCs Issued ^a	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	26	3	12	336	2	1	41	4	13	377
Akiok	AK	10	0	0	0	8	47	1,123	8	47	1,123
Akiachak	AK	1									
Akutan	AK	17	5	99	1,733	7	47	1,260	9	146	2,993
Aleknagik	AK	3									
Anchor Point	AK	9	2	38	529	0	0	0	2	38	529
Anchorage	AK	218	26	277	7,572	36	341	5,419	52	618	12,991
Angoon	AK	129	36	524	10,973	21	191	5,175	49	715	16,148
Atka	AK	3									
Auke Bay	AK	5									
Barrow	AK	1									
Bethel	AK	13	1	0	0	1	0	0	1	0	0
Chefornak	AK	15	0	0	0	3	18	250	3	18	250
Chenega Bay	AK	8	3	32	735	3	9	224	4	41	959
Chevak	AK	5									
Chignik	AK	13	2	7	258	1	2	25	3	10	283
Chignik Lagoon	AK	13	5	37	1,227	9	38	1,007	9	75	2,233
Chignik Lake	AK	8	0	0	0	5	19	197	5	19	197
Chiniak	AK	21	18	180	4,501	3	3	70	18	184	4,571
Chugiak	AK	4									
Clarks Point	AK	1									
Coffman Cove	AK	50	27	128	2,850	13	106	1,449	32	235	4,299
Cold Bay	AK	24	15	156	2,550	8	13	446	15	170	2,996
Cordova	AK	599	201	979	17,766	103	343	5,598	234	1,322	23,364
Craig	AK	547	248	1,894	39,802	114	606	9,128	284	2,500	48,930
Dillingham	AK	46	0	0	0	0	0	0	0	0	0
Douglas	AK	17	2	39	454	4	26	333	4	65	787
Dutch Harbor	AK	83	21	168	3,406	24	206	3,506	30	375	6,912
Eagle River	AK	4									
Edna Bay	AK	28	19	77	2,198	3	4	143	19	82	2,341
Eek	AK	6	0	0	0	4	4	100	4	4	100
Egegik	AK	1									
Elfin Cove	AK	17	5	43	1,072	3	10	359	5	53	1,431
Ester	AK	1									
Fairbanks	AK	4									
False Pass	AK	3									

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City	State	Number of SHARCs Issued ^a	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	
Fritz Creek	AK	1										
Gakona	AK	1										
Gambell	AK	1										
Girdwood	AK	1										
Golovin	AK	1										
Goodnews Bay	AK	4										
Gustavus	AK	81	15	156	3,328	15	52	1,000	26	209	4,328	
Haines	AK	528	284	1,365	27,295	68	120	2,341	286	1,485	29,635	
Hollis	AK	1										
Homer	AK	25	9	114	1,925	19	364	5,636	19	479	7,561	
Hoonah	AK	262	96	947	14,770	41	252	4,316	109	1,199	19,085	
Hooper Bay	AK	17	4	64	672	11	61	515	11	125	1,187	
Hydaburg	AK	119	61	609	19,037	17	83	2,815	63	693	21,853	
Hyder	AK	40	20	59	1,634	10	6	132	20	65	1,766	
Juneau	AK	338	70	567	9,138	48	274	3,551	82	842	12,689	
Kake	AK	127	52	434	10,851	15	21	556	54	454	11,407	
Kasaan	AK	15	9	54	870	5	8	182	9	62	1,052	
Kasilof	AK	13	3	66	492	2	13	136	3	79	629	
Kenai	AK	105	5	62	573	16	264	6,871	16	325	7,444	
Ketchikan	AK	598	179	1,553	25,806	110	831	11,138	208	2,383	36,944	
King Cove	AK	86	12	62	1,184	43	266	4,810	50	328	5,995	
King Salmon	AK	2										
Kipnuk	AK	12	0	0	0	7	78	273	7	78	273	
Klawock	AK	232	58	506	12,389	38	279	3,517	83	785	15,906	
Klukwan	AK	1										
Kodiak	AK	1,826	749	6,854	130,802	433	2,492	46,966	923	9,346	177,769	
Kongiganak	AK	7	0	0	0	3	7	117	3	7	117	
Kotzebue	AK	2										
Kwigillingok	AK	45	10	0	0	31	0	0	31	0	0	
Larsen Bay	AK	34	11	145	2,066	20	106	1,822	24	251	3,889	
Manokotak	AK	1										
Mekoryuk	AK	6	6	66	1,047	2	19	312	6	85	1,359	
Metlakatla	AK	207	30	147	2,186	32	129	2,764	54	276	4,950	
Meyers Chuck	AK	9	6	25	767	4	5	98	7	30	865	
Naknek	AK	9	8	0	0	8	0	0	8	0	0	
Nanwalek	AK	51	17	513	10,077	14	209	3,156	21	722	13,234	
Naukati	AK	19	9	24	916	1	1	35	9	25	951	
Nelson Lagoon	AK	1										
Newtok	AK	1										

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City	State	Number of SHARCs Issued ^a	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
Nightmute	AK	7	1	10	63	1	10	63	1	20	126
Nikiski	AK	10	2	0	0	5	125	2,007	5	125	2,007
Nikolski	AK	2									
Ninilchik	AK	41	2	50	515	5	181	2,620	7	231	3,135
Nome	AK	25	8	62	1,281	2	0	0	8	62	1,281
North Pole	AK	4									
Old Harbor	AK	64	23	93	1,778	32	127	2,597	49	221	4,376
Ouzinkie	AK	59	20	95	2,747	14	32	685	26	127	3,433
Palmer	AK	12	2	0	0	2	2	91	2	2	91
Pelican	AK	54	21	113	3,027	19	31	632	28	144	3,659
Perryville	AK	20	11	160	2,871	5	16	297	11	176	3,168
Petersburg	AK	1,041	323	1,736	30,105	224	1,081	16,661	418	2,816	46,766
Pilot Point	AK	2									
Point Baker	AK	22	17	84	1,529	1	3	69	18	87	1,597
Port Alexander	AK	30	19	191	4,697	5	8	210	19	199	4,907
Port Graham	AK	47	22	74	1,454	31	338	4,973	35	412	6,426
Port Heiden	AK	2									
Port Lions	AK	49	20	123	2,178	10	67	1,576	28	190	3,754
Port Protection	AK	2									
Port William	AK	2									
Quinhagak	AK	6	0	0	0	4	0	0	4	0	0
Sand Point	AK	137	28	180	3,987	58	475	7,772	70	654	11,759
Savoonga	AK	17	5	20	362	2	7	306	7	27	668
Saxman	AK	12	3	14	299	0	0	0	3	14	299
Scammon Bay	AK	1									
Seldovia	AK	165	53	612	10,573	63	760	11,135	93	1,372	21,708
Seward	AK	15	3	5	219	3	4	158	6	9	376
Sitka	AK	1,731	774	4,146	86,219	265	689	11,205	844	4,834	97,424
Skagway	AK	64	27	32	756	11	11	262	30	43	1,018
Soldotna	AK	39	2	52	460	16	255	3,013	18	307	3,473
South Naknek	AK	2									
St. George Island	AK	3									
St. Paul Island	AK	44	11	295	4,702	6	103	2,578	16	398	7,280
Sterling	AK	5									
Tatitlek	AK	17	4	34	1,210	2	29	604	6	63	1,814
Teller	AK	10	0	0	0	0	0	0	0	0	0
Tenakee Springs	AK	51	32	171	3,541	16	57	798	37	228	4,339
Thorne Bay	AK	115	57	313	7,864	27	161	3,799	67	474	11,663
Togiak	AK	9	0	0	0	0	0	0	0	0	0

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City	State	Number of SHARCs Issued ^a	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
Toksook Bay	AK	33	3	48	266	10	117	789	10	165	1,055
Trapper Creek	AK	1									
Tununak	AK	11	0	0	0	7	69	488	7	69	488
Twin Hills	AK	2									
Unalakleet	AK	1									
Unalaska	AK	81	35	628	15,799	30	309	6,595	46	937	22,394
Valdez	AK	37	33	193	3,301	21	43	1,477	33	235	4,778
Ward Cove	AK	28	0	0	0	6	20	226	6	20	226
Wasilla	AK	33	4	49	1,715	2	32	454	6	81	2,169
Waterfall	AK	1									
Whale Pass	AK	8	2	13	223	7	20	735	7	33	959
Whittier	AK	3									
Willow	AK	2									
Wrangell	AK	530	253	1,885	37,646	124	473	9,021	287	2,358	46,668
Yakutat	AK	109	46	538	8,068	22	175	3,122	60	713	11,190
Subtotal, AK		11,600	4,251	31,435	621,446	2,477	13,978	239,388	5,290	45,413	860,834
Non-Alaska subtotals		133	4	15	427	2	7	98	6	22	525
Totals		11,733	4,255	31,450	621,873	2,479	13,984	239,486	5,296	45,434	861,359

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.

Appendix E-6.—Estimated number of respondents that subsistence or sport fished, by place of residence.

City	State	Number of SHARCs Issued ^a	Estimated Number Subsistence or Sport Fished
Adak	AK	26	4
Akhiok	AK	10	8
Akiachak	AK	1	
Akutan	AK	17	9
Aleknagik	AK	3	
Anchor Point	AK	9	4
Anchorage	AK	218	74
Angoon	AK	129	52
Atka	AK	3	
Auke Bay	AK	5	
Barrow	AK	1	
Bethel	AK	13	1
Chefornak	AK	15	3
Chenega Bay	AK	8	5
Chevak	AK	5	
Chignik	AK	13	3
Chignik Lagoon	AK	13	9
Chignik Lake	AK	8	5
Chiniak	AK	21	18
Chugiak	AK	4	
Clarks Point	AK	1	
Coffman Cove	AK	50	36
Cold Bay	AK	24	15
Cordova	AK	599	269
Craig	AK	547	324
Dillingham	AK	46	5
Douglas	AK	17	4
Dutch Harbor	AK	83	46
Eagle River	AK	4	
Edna Bay	AK	28	22
Eek	AK	6	4
Egegik	AK	1	
Elfin Cove	AK	17	6
Ester	AK	1	
Fairbanks	AK	4	
False Pass	AK	3	
Fritz Creek	AK	1	
Gakona	AK	1	
Gambell	AK	1	
Girdwood	AK	1	
Golovin	AK	1	
Goodnews Bay	AK	4	
Gustavus	AK	81	41
Haines	AK	528	305
Hollis	AK	1	
Homer	AK	25	23
Hoonah	AK	262	119
Hooper Bay	AK	17	11
Hydaburg	AK	119	63
Hyder	AK	40	20
Juneau	AK	338	119
Kake	AK	127	56
Kasaan	AK	15	9
Kasilof	AK	13	6
Kenai	AK	105	28
Ketchikan	AK	598	259
King Cove	AK	86	50
King Salmon	AK	2	
Kipnuk	AK	12	7
Klawock	AK	232	101

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City	State	Number of SHARCs Issued ^a	Estimated Number Subsistence or Sport Fished
Klukwan	AK	1	
Kodiak	AK	1826	1139
Kongiganak	AK	7	3
Kotzebue	AK	2	
Kwigillingok	AK	45	31
Larsen Bay	AK	34	24
Manokotak	AK	1	
Mekoryuk	AK	6	6
Metlakatla	AK	207	61
Meyers Chuck	AK	9	7
Naknek	AK	9	8
Nanwalek	AK	51	21
Naukati	AK	19	11
Nelson Lagoon	AK	1	
Newtok	AK	1	
Nightmute	AK	7	1
Nikiski	AK	10	7
Nikolski	AK	2	
Ninilchik	AK	41	14
Nome	AK	25	8
North Pole	AK	4	
Old Harbor	AK	64	49
Ouzinkie	AK	59	26
Palmer	AK	12	4
Pelican	AK	54	32
Perryville	AK	20	11
Petersburg	AK	1041	513
Pilot Point	AK	2	
Point Baker	AK	22	18
Port Alexander	AK	30	22
Port Graham	AK	47	35
Port Heiden	AK	2	
Port Lions	AK	49	28
Port Protection	AK	2	
Port William	AK	2	
Quinhagak	AK	6	4
Sand Point	AK	137	70
Savoonga	AK	17	7
Saxman	AK	12	3
Scammon Bay	AK	1	
Seldovia	AK	165	104
Seward	AK	15	6
Sitka	AK	1731	941
Skagway	AK	64	36
Soldotna	AK	39	24
South Naknek	AK	2	
St. George Island	AK	3	
St. Paul Island	AK	44	16
Sterling	AK	5	
Tatitlek	AK	17	6
Teller	AK	10	0
Tenakee Springs	AK	51	39
Thorne Bay	AK	115	78
Togiak	AK	9	0
Toksook Bay	AK	33	10
Trapper Creek	AK	1	
Tununak	AK	11	7
Twin Hills	AK	2	
Unalakleet	AK	1	
Unalaska	AK	81	52
Valdez	AK	37	33

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City	State	Number of SHARCs Issued ^a	Estimated Number Subsistence or Sport Fished
Ward Cove	AK	28	8
Wasilla	AK	33	6
Waterfall	AK	1	
Whale Pass	AK	8	7
Whittier	AK	3	
Willow	AK	2	
Wrangell	AK	530	322
Yakutat	AK	109	67
Subtotal, AK		11,600	6,122
Subtotal, non-Alaska residents		133	31
Total		11,733	6,153

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.

Appendix E-7.—Estimated subsistence harvests of halibut and sport harvests of halibut, pounds (net weight), and incidental harvests of lingcod and rockfish, by eligible Alaska tribe and eligible Alaska rural community, 2009.

Tribal name	Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch		
	Regulatory area	SHARCs issued ^a	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Angoon Community Association	2C	109	42	38.5%	40	36.7%	514	10534	5	4.4%	12	84	0	0	7	41
Aukquan Traditional Council	2C	1														
Central Council Tlingit And Haida Indian Tribes	2C	503	218	43.3%	166	33.0%	1972	34127	99	19.8%	369	4843	11	63	43	249
Chilkat Indian Village	2C	23	18	78.3%	4	16.7%	26	293	3	11.1%	5	85	0	0	1	1
Chilkoot Indian Association	2C	48	27	56.3%	12	25.4%	80	1828	7	14.5%	10	238	0	0	0	0
Craig Community Association	2C	63	25	39.7%	30	47.6%	223	9205	5	7.9%	15	193	3	5	15	85
Douglas Indian Association	2C	16	4	25.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Hoonah Indian Association	2C	144	69	47.9%	47	32.9%	538	9537	8	5.7%	14	176	0	0	6	47
Hydaburg Cooperative Association	2C	123	106	86.2%	61	49.9%	661	20941	7	5.7%	8	360	18	99	33	708
Ketchikan Indian Corporation	2C	512	176	34.4%	148	29.0%	1561	25754	117	22.9%	402	6013	24	127	49	418
Klawock Cooperative Association	2C	74	32	43.2%	19	25.1%	146	4552	2	3.1%	23	244	0	0	12	93
Metlakatla Indian Community, Annette Island Reserve	2C	178	70	39.3%	38	21.5%	138	2987	18	10.0%	18	340	5	26	5	8
Organized Village of Kake	2C	84	54	64.3%	30	35.6%	277	7188	2	1.8%	3	43	2	2	3	26
Organized Village of Kasaan	2C	9	4	44.4%	6	66.7%	44	812	2	22.2%	0	0	0	0	0	0
Organized Village of Saxman	2C	39	13	33.3%	28	73.0%	507	4234	6	14.6%	14	508	0	0	6	57
Petersburg Indian Association	2C	73	35	47.9%	26	35.6%	212	2963	12	16.4%	36	308	0	0	0	0
Sitka Tribe of Alaska	2C	288	164	56.9%	109	37.7%	700	13878	20	7.1%	59	374	36	117	44	360
Skagway Village	2C	4														
Wrangell Cooperative Association	2C	95	68	71.6%	42	43.9%	416	8743	18	18.6%	36	1290	1	3	8	53
Subtotal, Area 2C		2,386	1,128	47.3%	807	33.8%	8014	157578	331	13.9%	1026	15098	100	440	233	2145
Kenaitze Indian Tribe	3A	118	55	46.6%	27	23.1%	442	8732	15	12.4%	59	813	0	0	2	4
Lesnoi Village (Woody Island)	3A	72	37	51.4%	11	15.8%	98	2390	8	10.5%	26	437	4	4	6	47
Native Village of Afognak	3A	24	14	58.3%	13	53.8%	65	1572	8	33.7%	45	1001	0	0	0	0
Native Village of Akhiok	3A	12	4	33.3%	7	56.3%	45	1095	2	18.8%	9	126	2	7	2	2
Native Village of Chenega	3A	18	4	22.2%	17	94.4%	47	1476	17	94.4%	26	699	4	4	9	34

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Tribal name	Regulatory area	Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCs issued ^a	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Native Village of Eyak	3A	79	39	49.4%	24	30.0%	124	2657	8	10.0%	10	152	2	2	4	18
Native Village of Karluk	3A	1														
Native Village of Larsen Bay	3A	33	18	54.5%	28	83.3%	323	5011	11	33.3%	92	1546	9	147	9	249
Native Village of Nanwalek	3A	43	16	37.2%	16	37.2%	474	8180	1	2.3%	1	14	3	27	5	177
Native Village of Ouzinkie	3A	36	17	47.2%	19	51.6%	126	2830	6	17.2%	29	289	6	8	6	50
Native Village of Port Graham	3A	40	16	40.0%	34	84.8%	499	10905	9	21.5%	17	239	4	14	9	150
Native Village of Port Lions	3A	35	16	45.7%	24	69.8%	154	3465	9	24.5%	36	728	2	15	2	24
Native Village of Tatitlek	3A	23	12	52.2%	10	41.7%	98	2566	4	16.7%	19	545	2	4	4	4
Ninilchik Village	3A	82	34	41.5%	18	22.1%	541	7756	14	16.6%	82	1500	0	0	0	0
Seldovia Village Tribe	3A	53	29	54.7%	30	57.0%	399	5806	15	28.5%	68	1026	4	6	8	51
Shoonaq' Tribe of Kodiak	3A	133	68	51.1%	82	62.0%	1376	32330	22	16.8%	117	1925	9	53	11	90
Village of Kanatak	3A	12	8	66.7%	3	25.0%	18	347	0	0.0%	0	0	3	5	3	8
Village of Old Harbor	3A	62	25	40.3%	38	60.8%	156	3146	13	20.7%	20	399	0	0	2	19
Village of Salamatoff	3A	23	15	65.2%	6	24.8%	73	1110	4	18.6%	7	210	0	0	0	0
Yakutat Tlingit Tribe	3A	38	23	60.5%	20	51.7%	311	5600	2	4.3%	20	573	7	33	3	33
Subtotal, Area 3A		937	451	48.1%	426	45.4%	5368	106972	166	17.8%	682	12221	61	328	84	959
Agdaagux Tribe of King Cove	3B	69	34	49.3%	41	59.4%	288	5884	20	29.0%	48	854	6	42	10	138
Chignik Lake Village	3B	10	4	40.0%	7	67.5%	30	339	2	22.5%	0	0	0	0	0	0
Ivanoff Bay Village	3B	8	3	37.5%	3	33.3%	0	0	3	33.3%	13	560	3	3	3	3
Native Village of Belkofski	3B	4														
Native Village of Chignik	3B	7	6	85.7%	1	16.7%	2	25	0	0.0%	0	0	0	0	0	0
Native Village of Chignik Lagoon	3B	21	16	76.2%	15	71.4%	123	3154	3	11.9%	5	105	0	0	4	95
Native Village of False Pass	3B	1														
Native Village of Nelson Lagoon	3B	3														
Native Village of Perryville	3B	22	14	63.6%	13	57.1%	179	3201	5	21.4%	6	99	0	0	3	71
Native Village of Unga	3B	11	4	36.4%	6	54.5%	48	896	0	0.0%	0	0	0	0	0	0
Pauloff Harbor Village	3B	45	10	22.2%	18	40.0%	203	3969	9	20.0%	68	1632	14	27	9	365
Qagan Toyagungin Tribe of Sand Point Village	3B	84	45	53.6%	40	47.7%	284	5249	5	6.5%	33	478	5	15	5	202
Subtotal, Area 3B		285	140	49.1%	147	51.7%	1277	23975	47	16.4%	173	3728	28	86	34	873
Native Village of Akutan	4A	18	8	44.4%	9	50.0%	146	2993	0	0.0%	0	0	0	0	2	34
Qawalingin Tribe of Unalaska	4A	37	16	43.2%	10	25.9%	103	1732	10	25.9%	14	134	0	0	0	0
Subtotal, Area 4A		55	24	43.6%	19	33.8%	249	4725	10	17.5%	14	134	0	0	2	34

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Tribal name	Regulatory area	Return rate		Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
		SHARCS issued ^a	Surveys returned	Percent	Estimated number respondents	Percent of SHARCS	Estimated number fish	Estimated number pounds	Estimated number respondents	Percent of SHARCS	Estimated number fish	Estimated number pounds	Estimated number respondents	Estimated number fish	Estimated number respondents
Native Village of Atka	4B	5													
Subtotal, Area 4B		5	3	60.0%	3	66.7%	82	898	2	33.3%	0	0	0	0	0
Pribilof Islands Aleut Community of St. George	4C	5													
Pribilof Islands Aleut Community of St. Paul	4C	44	13	29.5%	15	33.3%	323	6580	0	0.0%	0	0	0	0	0
Subtotal, Area 4C		49	15	30.6%	20	40.1%	366	7280	0	0.0%	0	0	3	5	3
Native Village of Diomedea (Inalik)	4D	1													
Native Village of Gambell	4D	1													
Native Village of Savoonga	4D	18	8	44.4%	7	37.5%	27	668	0	0.0%	0	0	0	0	0
Subtotal, Area 4D		20	10	50.0%	8	38.8%	39	790	0	0.0%	0	0	1	1	0
Chevak Native Village (Kashunamiut)	4E	6	3	50.0%	3	50.0%	8	193	0	0.0%	0	0	0	0	0
Chinik Eskimo Community	4E	1													
Egegik Village	4E	1													
King Island Native Community	4E	1													
Levelock Village	4E	1													
Manokotak Village	4E	1													
Naknek Native Village	4E	9	1	11.1%	7	77.8%	0	0	0	0.0%	0	0	0	0	0
Native Village of Aleknagik	4E	6	3	50.0%	2	33.3%	4	84	0	0.0%	0	0	0	0	0
Native Village of Brevig Mission	4E	1													
Native Village of Council	4E	4													
Native Village of Dillingham (Curyung)	4E	16	7	43.8%	4	26.8%	9	270	9	53.6%	26	494	0	0	0
Native Village of Eek	4E	7	5	71.4%	6	80.0%	4	100	0	0.0%	0	0	0	0	0
Native Village of Goodnews Bay (Mumtraq)	4E	4													
Native Village of Hooper Bay	4E	18	5	27.8%	10	53.3%	125	1187	3	17.8%	32	112	0	0	0
Native Village of Kakanak	4E	1													
Native Village of Kipnuk	4E	13	2	15.4%	7	50.0%	78	273	0	0.0%	0	0	0	0	0
Native Village of Kongiganak	4E	6	3	50.0%	3	55.6%	7	117	0	0.0%	0	0	0	0	0
Native Village of Koyuk	4E	1													
Native Village of Kwigillingok	4E	46	5	10.9%	31	66.8%	0	0	0	0.0%	0	0	0	0	0

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Tribal name	Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
	Regulatory area	SHARCs issued ^a	Surveys returned Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Native Village of Kwinhagak	4E	4													
Native Village of Mekoryuk	4E	6	5 83.3%	5	80.0%	67	1169	1	20.0%	10	147	1	8	0	0
Native Village of Nightmute	4E	5													
Native Village of Port Heiden	4E	1													
Native Village of Scammon Bay	4E	5													
Native Village of Toksook Bay (Nunakauyak)	4E	33	12 36.4%	9	27.3%	164	1048	0	0.0%	0	0	0	0	0	0
Native Village of Tununak	4E	13	6 46.2%	7	50.0%	69	488	0	0.0%	0	0	0	0	0	0
Native Village of Unalakleet	4E	3													
Native Village of Wales	4E	1													
Newtok Village	4E	1													
Nome Eskimo Community	4E	15	4 26.7%	8	50.0%	105	2179	0	0.0%	0	0	4	19	0	0
Orutsararmuit Native Village	4E	9	5 55.6%	2	20.0%	47	1232	2	20.0%	5	139	0	0	0	0
South Naknek Village	4E	2													
Stebbins Community Association	4E	4													
Traditional Village of Togiak	4E	7	3 42.9%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Twin Hills Village	4E	1													
Ugashik Village	4E	2													
Village of Cheforak	4E	15	5 33.3%	3	20.0%	18	250	0	0.0%	0	0	0	0	0	0
Village of Clark's Point	4E	1													
Village of Kotlik	4E	1													
Subtotal, Area 4E		272	92 33.8%	120	44.0%	793	9728	19	6.9%	103	1280	6	31	1	20
Tribal Name Subtotals		4,009	1,863 46.5%	1,549	38.6%	16,187	311,947	574	14.3%	1,998	32,461	197	892	357	4,044

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Rural community	Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch	
	Regulatory area	SHARCs issued ^a	Surveys returned Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Angoon	2C	19	11 57.9%	9	44.7%	202	5614	7	34.2%	13	200	0	0	3	94
Coffman Cove	2C	55	43 78.2%	34	61.2%	242	4448	19	34.3%	149	1972	1	9	10	53
Craig	2C	417	252 60.4%	213	51.2%	1856	28820	132	31.8%	708	8341	78	202	113	944
Edna Bay	2C	47	27 57.4%	23	49.7%	96	2913	9	18.6%	20	388	4	22	4	51
Elfin Cove	2C	18	12 66.7%	5	27.8%	53	1431	3	13.9%	3	153	4	16	4	68
Gustavus	2C	83	55 66.3%	26	30.8%	209	4328	19	23.1%	100	1628	4	25	3	32
Haines	2C	470	367 78.1%	266	56.7%	1332	26770	85	18.1%	75	1251	9	34	25	106
Hollis	2C	44	37 84.1%	26	59.4%	69	2386	9	20.5%	16	221	2	3	11	63
Hoonah	2C	119	81 68.1%	59	50.0%	531	8086	25	20.6%	191	2201	3	3	15	101
Hydaburg	2C	15	12 80.0%	11	72.1%	47	1325	6	43.0%	9	206	2	2	7	31
Hyder	2C	42	30 71.4%	20	47.3%	65	1766	4	8.5%	1	22	0	0	4	11
Kake	2C	43	26 60.5%	26	60.2%	186	4436	12	29.0%	13	440	0	0	8	71
Kasaan	2C	10	9 90.0%	7	65.7%	24	380	3	31.4%	1	48	0	0	2	24
Klawock	2C	146	101 69.2%	69	47.1%	712	11592	47	32.1%	269	3197	28	66	34	456
Klukwan	2C	2													
Metlakatla	2C	39	12 30.8%	18	46.2%	153	2321	6	15.4%	12	137	0	0	0	0
Meyers Chuck	2C	9	9 100.0%	7	77.8%	30	865	0	0.0%	0	0	0	0	2	14
Naukati Bay	2C	24	19 79.2%	18	73.7%	69	2071	10	42.1%	39	908	1	1	10	90
Pelican	2C	47	27 57.4%	21	45.4%	98	2108	6	12.4%	6	194	6	17	14	179
Petersburg	2C	958	655 68.4%	383	40.0%	2478	41890	228	23.8%	823	12721	15	44	55	275
Port Alexander	2C	32	19 59.4%	18	55.2%	194	4732	11	34.4%	3	43	12	43	14	201
Port Protection	2C	19	13 68.4%	12	64.8%	113	2307	4	19.4%	5	59	5	9	10	87
Pt. Baker	2C	16	12 75.0%	13	82.5%	44	869	2	15.0%	4	48	0	0	7	70
Saxman	2C	17	8 47.1%	4	22.1%	112	1768	6	32.4%	41	770	3	28	4	58
Sitka	2C	1446	982 67.9%	717	49.6%	4066	82246	247	17.1%	673	10603	318	930	369	2931
Skagway	2C	58	42 72.4%	28	48.9%	29	896	15	25.3%	11	146	0	0	1	3
Tenakee Springs	2C	51	46 90.2%	37	72.4%	228	4339	18	36.2%	45	710	1	1	16	92
Thorne Bay	2C	119	98 82.4%	65	54.6%	459	10964	35	29.7%	77	1585	14	60	35	290
Whale Pass	2C	25	21 84.0%	12	47.8%	60	2338	6	24.0%	6	242	0	0	2	22
Wrangell	2C	414	302 72.9%	234	56.4%	1853	36149	114	27.4%	295	5546	18	77	49	429
Subtotal, Area 2C		4804	3330 69.3%	2381	49.6%	15610	300156	1087	22.6%	3608	53978	527	1593	832	6846
Akhiok	3A	1													
Cheneg Bay	3A	7	7 100.0%	5	71.4%	62	1218	4	57.1%	30	482	2	10	4	58
Cordova	3A	536	364 67.9%	212	39.5%	1234	21657	110	20.6%	286	4817	22	50	38	235
Kodiak	3A	1687	947 56.1%	835	49.5%	8541	162767	597	35.4%	3319	62314	108	387	151	1544
Larsen Bay	3A	10	6 60.0%	4	37.5%	0	0	2	20.0%	24	840	0	0	0	0
Nanwalek	3A	11	6 54.5%	6	54.5%	253	5159	0	0.0%	0	0	2	22	2	74
Old Harbor	3A	17	10 58.8%	13	77.9%	72	1297	2	10.3%	18	245	0	0	0	0
Ouzinkie	3A	25	12 48.0%	8	31.1%	29	689	3	11.6%	4	131	0	0	1	6
Port Graham	3A	12	7 58.3%	7	59.5%	139	2170	1	11.9%	0	0	1	17	1	14

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Rural community	Regulatory area	Return rate		Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch		
		SHARCs issued ^a	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Port Lions	3A	17	7	41.2%	10	57.4%	66	1040	8	45.6%	20	327	0	0	0	0
Seldovia	3A	164	119	72.6%	94	57.4%	1471	22850	58	35.5%	347	5204	8	27	12	112
Tatitlek	3A	11	5	45.5%	7	61.4%	95	1292	2	20.5%	7	71	0	0	0	0
Yakutat	3A	75	50	66.7%	42	55.9%	460	7308	15	20.5%	91	1570	17	99	7	113
Subtotal, Area 3A		2573	1541	59.9%	1244	48.3%	12423	227473	804	31.2%	4147	76030	160	612	217	2156
Chignik	3B	4														
Chignik Lagoon	3B	1														
Chignik Lake	3B	4														
Cold Bay	3B	22	20	90.9%	13	61.0%	170	2996	10	45.7%	30	567	3	229	2	16
False Pass	3B	2														
King Cove	3B	27	22	81.5%	17	63.1%	116	2407	5	16.8%	0	0	1	2	5	27
Nelson Lagoon	3B	1														
Perryville	3B	1														
Sand Point	3B	22	10	45.5%	9	40.9%	135	1863	5	21.2%	44	555	0	0	3	87
Subtotal, Area 3B		84	59	70.2%	41	49.4%	430	7543	19	22.9%	75	1123	4	231	10	130
Akutan	4A	1														
Nikolski	4A	2														
Unalaska	4A	127	77	60.6%	60	47.0%	677	11888	36	28.6%	110	1727	8	53	11	128
Subtotal, Area 4A		130	78	60.0%	61	46.7%	691	12676	36	27.9%	110	1727	8	53	12	140
Adak	4B	26	13	50.0%	2	9.0%	1	41	1	4.5%	0	0	0	0	0	0
Atka	4B	2														
Subtotal, Area 4B		28	14	50.0%	4	15.5%	25	209	1	4.2%	0	0	0	0	0	0
St. George Island	4C	1														
St. Paul Island	4C	2														
Subtotal, Area 4C		3	1	33.3%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Aleknagik	4E	2														
Bethel	4E	3														
Chefornak	4E	1														
Dillingham	4E	41	24	58.5%	5	11.0%	0	0	5	12.7%	0	0	0	0	0	0
Egegik	4E	1														
Hooper Bay	4E	1														
King Salmon	4E	2														
Kongiganak	4E	1														
Manokotak	4E	1														
Mekoryuk	4E	1														
Naknek	4E	4														
Nightmute	4E	2														
Nome	4E	21	13	61.9%	7	33.3%	50	1159	0	0.0%	0	0	2	8	0	0
Port Heiden	4E	3														
Quinhagak	4E	2														

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	Return rate			Subsistence fished halibut		Subsistence halibut harvest		Sport fished halibut		Sport halibut harvest		Lingcod bycatch		Rockfish bycatch		
	Regulatory area	SHARCs issued ^a	Surveys returned	Percent	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Percent of SHARCs	Estimated number fish	Estimated number pounds	Estimated number respondents	Estimated number fish	Estimated number respondents	Estimated number fish
Rural community																
South Naknek	4E															
Teller	4E	10	6	60.0%	0	0.0%	0	0	0	0.0%	0	0	0	0	0	0
Togiak	4E															
Toksook Bay	4E															
White Mountain	4E															
Subtotal, Area 4E		102	58	56.9%	17	16.5%	69	1355	7	6.4%	0	0	3	10	0	0
Rural community subtotals		7,724	5,081	65.8%	3,748	48.5%	29,247	549,412	1,954	25.3%	7,940	132,857	702	2,499	1,071	9,271
Tribal name subtotals		4,009	1,863	46.5%	1,549	38.6%	16,187	311,947	574	14.3%	1,998	32,461	197	892	357	4,044
Rural community subtotals		7,724	5,081	65.8%	3,748	48.5%	29,247	549,412	1,954	25.3%	7,940	132,857	702	2,499	1,071	9,271
Totals		11,733	6,944	59.2%	5,296	45.1%	45,434	861,359	2,528	21.5%	9,938	165,318	900	3,390	1,427	13,315

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.



SUBSISTENCE HARVESTS OF PACIFIC HALIBUT IN ALASKA, 2009

Division of Subsistence, Alaska Department of Fish and Game
333 Raspberry Road, Anchorage, AK 99518
December 2010

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 2009. The full results of the study appear in the Division's Technical Paper No. 357, "Subsistence Harvests of Pacific Halibut in Alaska, 2009" (January 2011). 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 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; 800-304-4846).
- 2009 was the seventh year in which subsistence halibut fishing took place under these regulations. Information about subsistence halibut harvests in 2003–2008 is reported in Division of Subsistence Technical Papers 288, 304, 320, 333, 342, and 348, respectively.
- To estimate the 2009 harvests, a one-page survey form was mailed to SHARC holders in early 2010 or administered in person. After two mailings and community visits, 6,944 of 11,733 SHARC holders (59%) responded. Participation in the survey was voluntary.
- An estimated 5,296 individuals subsistence fished for halibut in 2009 (Figure 8).
- The estimated subsistence harvest was 45,434 halibut for 861,359 pounds net weight.
- Of this total, 72% was harvested with setline (stationary) gear (longline or skate) and 28% was harvested with hand-operated gear (handline or rod and reel).
- The largest subsistence harvests occurred in Southeast Alaska (Halibut Regulatory Area 2C), at 53% of the total, followed by Southcentral Alaska (Area 3A) at 38%. Table 6 and Figure 17 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 2009 were Kodiak and Sitka (the largest eligible communities) (Figure 22).
- An estimated 13,315 rockfish were harvested by 1,427 fishers in the subsistence halibut fishery in 2009. Most (76%) were harvested in Southeast Alaska.
- An estimated 3,390 lingcod were harvested by 900 fishers in the subsistence halibut fishery in 2009. Most (60%) were harvested in Southeast Alaska.
- Based on preliminary data from the International Pacific Halibut Commission and this study, the estimated halibut removal in Alaska in 2009 was 70.730 million pounds, net weight. Subsistence harvests accounted for 1.2% of this total (Figure 33).
- The report concludes that the project was, overall, a success, with good response rates and a reliable estimate of subsistence halibut harvests. However, analysis suggests that a significant number of fishers may not have renewed their SHARCs. Additional outreach among eligible tribes and rural areas is necessary to maximize enrollment of fishers in the SHARC program.
- The report also recommends that monitoring of the Alaska subsistence halibut harvest continue in order to evaluate trends in the fishery.

For a copy of the full report, go to www.subsistence.adfg.state.ak.us, or call the Division of Subsistence of ADF&G at 907-267-2353 (Anchorage) or 907-465-4147 (Juneau).

Table 6.—Estimated Alaska subsistence harvests of halibut by regulatory area and subarea fished and gear type, and estimated sport harvests by SHARC holders, 2009.

Subarea	Regulatory area	Estimated subsistence harvest by gear type ^a												Estimated sport harvest					
		Set hook gear						Hook and line or handline						All gear			Estimated sport harvest		
		Number of SHARCS fished ^b	Estimated number fished	Estimated number harvested	Estimated pounds harvested ^c	Estimated number respondents	Estimated number fished	Estimated number harvested	Estimated pounds harvested ^c	Estimated number respondents	Estimated number fished	Estimated number harvested	Estimated pounds harvested ^c	Estimated number respondents	Estimated number fished	Estimated number harvested	Estimated pounds harvested ^c		
	2C	1,724	1,442	9,748	199,192	790	3,835	62,853	1,724	13,583	262,046	895	3,012	46,811					
	Southeast Alaska																		
	2C	827	750	3,848	79,861	284	645	9,951	827	4,493	89,812	281	711	10,058					
	Sitka Lamp Area																		
	2C	802	726	4,361	84,699	297	1,111	20,440	802	5,472	105,139	313	799	11,290					
	Northern Southeast Alaska																		
	2C	3,216	2,794	17,957	363,753	1,299	5,591	93,244	3,216	23,548	456,997	1,435	4,522	68,158					
	Subtotal, Area 2C																		
	3A	79	62	632	10,595	29	205	3,795	79	837	14,390	35	254	3,611					
	Yakutat Area																		
	3A	325	275	1,336	25,690	153	445	8,107	325	1,780	33,796	171	381	6,819					
	Prince William Sound																		
	3A	278	149	2,010	36,115	212	2,844	44,927	278	4,854	81,043	155	728	11,625					
	Cook Inlet																		
	3A	713	577	4,166	76,906	361	1,744	31,143	713	5,910	108,049	534	2,280	39,792					
	Kodiak Island road system																		
	3A	640	506	3,327	67,445	316	1,144	23,757	640	4,471	91,202	340	1,401	29,429					
	Kodiak Island—Other																		
	3A	1,758	1,328	11,471	216,751	909	6,381	111,729	1,758	17,852	328,480	1,023	5,043	91,276					
	Subtotal, Area 3A																		
	3B	34	19	189	3,831	24	100	2,058	34	290	5,889	4	6	99					
	Chignik Area																		
	3B	137	60	389	7,457	106	700	12,146	137	1,089	19,603	54	210	3,812					
	Lower Alaska Peninsula																		
	3B	169	79	578	11,288	129	801	14,204	169	1,379	25,492	59	216	3,911					
	Subtotal, Area 3B																		
	4A	87	61	899	21,400	60	556	11,689	87	1,455	33,090	47	121	1,790					
	Eastern Aleutians—East																		
	4A	6	2	0	0	6	11	409	6	11	409	5	4	71					
	Eastern Aleutians—West																		
	4A	92	62	899	21,400	65	567	12,098	92	1,466	33,499	49	125	1,861					
	Subtotal, Area 4A																		
	4B	12	8	12	336	10	65	839	12	77	1,175	6	0	0					
	Western Aleutians—East																		
	4B	0	0	0	0	0	0	0	0	0	0	0	0	0					
	Western Aleutians—Other																		
	4B	12	8	12	336	10	65	839	12	77	1,175	6	0	0					
	Subtotal, Area 4B																		
	4C	5	3	13	263	3	30	438	5	43	700	0	0	0					
	St. George Island																		
	4C	8	4	203	3,745	4	28	1,878	8	231	5,623	0	0	0					
	St. Paul Island																		
	4C	13	7	215	4,008	7	58	2,316	13	274	6,323	0	0	0					
	Subtotal, Area 4C																		
	4D	7	5	19	339	2	7	306	7	26	644	0	0	0					
	St. Lawrence Island																		
	4D	0	0	0	0	0	0	0	0	0	0	0	0	0					
	Area 4D—Other																		
	4D	7	5	19	339	2	7	306	7	26	644	0	0	0					
	Subtotal, Area 4D																		
	4E	8	8	0	0	8	0	0	8	0	0	7	0	0					
	Bristol Bay																		
	4E	108	34	236	2,718	98	516	4,750	108	752	7,468	6	32	112					
	Yukon Delta																		
	4E	8	8	62	1,281	2	0	0	8	62	1,281	0	0	0					
	Norton Sound																		
	4E	5	0	0	0	5	0	0	5	0	0	0	0	0					
	Katzebe Sound																		
	4E	128	51	298	3,999	113	516	4,750	128	813	8,749	12	32	112					
	Subtotal, Area 4E																		
	Total, Alaska ^d	5,296	4,255	31,450	621,873	2,479	13,984	239,486	5,296	45,434	861,359	2,528	9,938	165,318					

Source: ADF&G Division of Subsistence, SHARC survey, 2009.

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

b. Weights given are "net weight." Pounds net (dressed) 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. Includes subsistence and sport fishing.

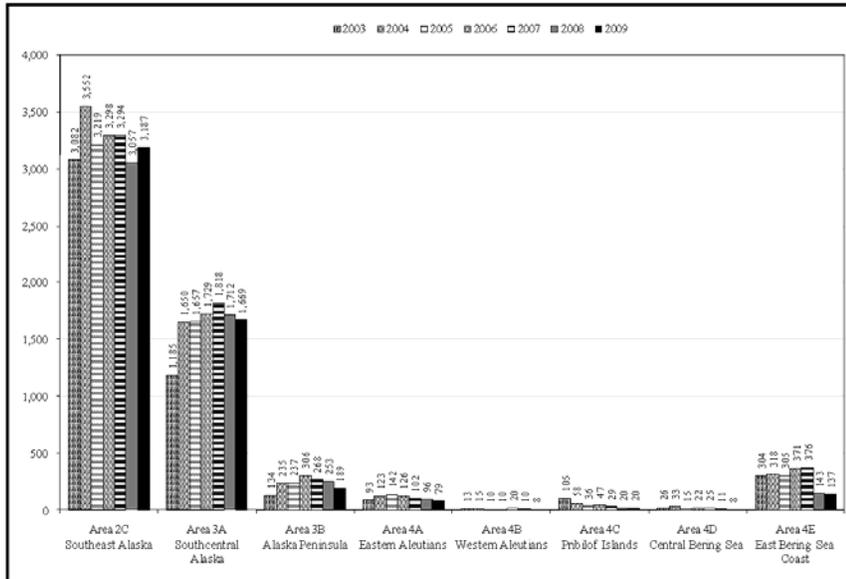


Figure 8.—Estimated number of Alaska subsistence halibut fishers, by regulatory area of tribe or rural community, 2003–2009.

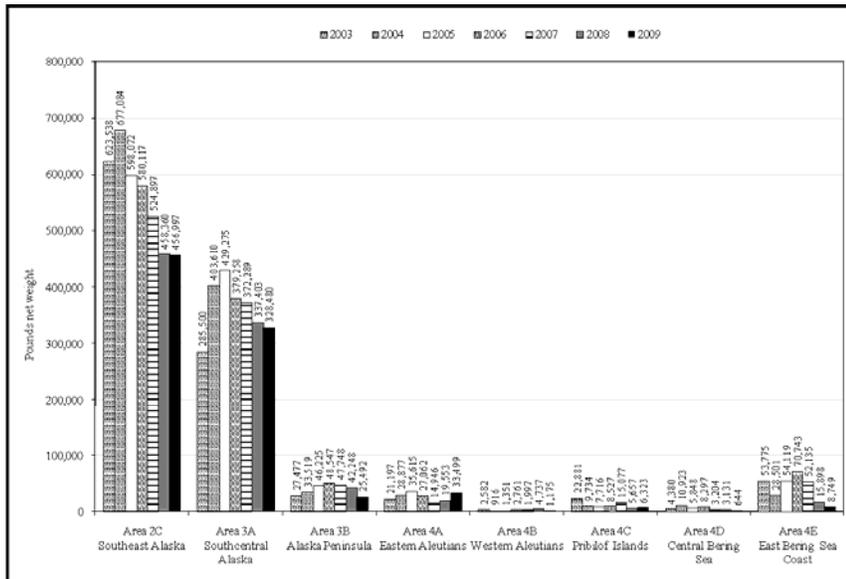


Figure 17.—Estimated subsistence halibut harvests, pounds net weight, by regulatory area fished, 2003–2009.

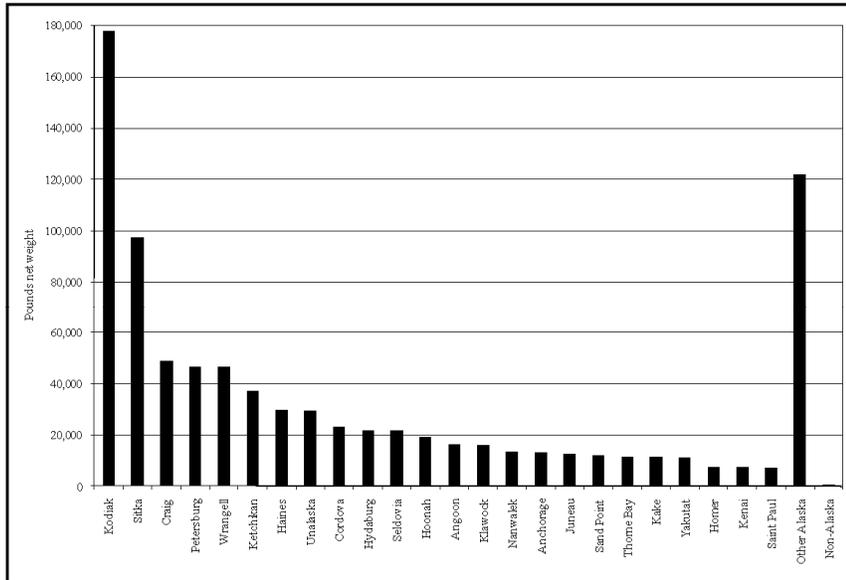


Figure 22.—Alaska subsistence halibut harvests, by place of residence, 2009.

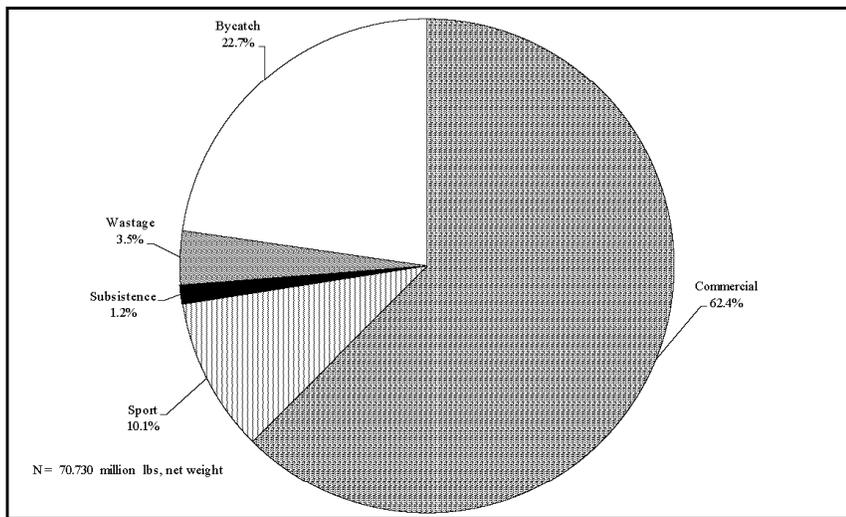


Figure 33.—Halibut removals, Alaska, 2009.

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