



SUBSISTENCE HARVESTS OF PACIFIC HALIBUT IN ALASKA, 2011

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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 2011. The full results of the study appear in the Division's Technical Paper No. 378, "Subsistence Harvests of Pacific Halibut in Alaska, 2011" (January 2013). Key points in the report include the following:

- In May 2003, the NMFS published final federal regulations for a subsistence halibut fishery in Alaska. Residents of 118 rural communities and designated rural areas, and members of 123 tribes are eligible to participate. Fishers must obtain a subsistence halibut registration certificate (SHARC) from NMFS before fishing (www.fakr.noaa.gov/ram/subsistence/halibut.htm; 800-304-4846).
- 2011 was the ninth year in which subsistence halibut fishing took place under these regulations. Information about subsistence halibut harvests in 2003–2010 is reported in Division of Subsistence Technical Papers 288, 304, 320, 333, 342, 348, 357, and 367, respectively.
- To estimate the 2011 harvests, a one-page survey form was mailed to SHARC holders in early 2011 or administered in person. After three mailings and community visits, 7,589 of 11,145 SHARC holders (68%) responded. Participation in the survey was voluntary.
- An estimated 4,705 individuals subsistence fished for halibut in 2011 (Figure 9).
- The estimated subsistence harvest was 38,162 halibut for 697,656 pounds net weight.
- Of this total, 77% was harvested with setline (stationary) gear (longline or skate) and 23% was harvested with hand-operated gear (handline or rod and reel).
- The largest subsistence harvests occurred in Southeast Alaska (Halibut Regulatory Area 2C), at 55% 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 2011 were Kodiak and Sitka (the largest eligible communities) (Figure 22).
- An estimated 10,853 rockfish were harvested by 1,220 fishers in the subsistence halibut fishery in 2010. Most (70%) were harvested in Southeast Alaska.
- An estimated 2,305 lingcod were harvested by 730 fishers in the subsistence halibut fishery in 2010. Most (66%) 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 2011 was 50.552 million pounds, net weight. Subsistence harvests accounted for 1.4% 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 fishers in some communities 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 <http://www.adfg.alaska.gov/sf/publications/>, or call the Division of Subsistence of ADF&G at 907-267-2353 (Anchorage) or 907-465-4147 (Juneau).

Table 1.—Estimated harvests of halibut in numbers of fish and pounds net (dressed, head-off) weight by regulatory area and subarea, 2011.

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	1,454	1,183	7,497	163,184	616	2,667	40,878	1,454	10,164	204,062	735	2,541	43,043
Sitka Lamp Area	2C	736	693	3,346	75,770	163	456	7,666	736	3,803	83,436	259	522	8,295
Northern Southeast Alaska	2C	770	677	4,316	86,936	244	812	12,533	770	5,128	99,470	256	905	12,935
Subtotal, Area 2C		2,859	2,462	15,160	325,890	977	3,935	61,078	2,859	19,095	386,967	1,200	3,967	64,274
Yakutat Area	3A	88	69	545	11,949	41	253	3,813	88	798	15,762	29	141	2,345
Prince William Sound	3A	273	239	1,398	26,079	105	394	6,743	273	1,791	32,822	136	327	5,372
Cook Inlet	3A	258	167	2,210	34,026	169	2,109	26,310	258	4,319	60,337	116	536	7,246
Kodiak Island road system	3A	575	484	3,440	61,258	274	1,354	18,649	575	4,794	79,907	414	1,865	31,503
Kodiak Island—Other	3A	592	466	3,112	55,344	279	1,120	21,932	592	4,233	77,276	285	1,073	19,398
Subtotal, Area 3A		1,580	1,237	10,705	188,657	774	5,231	77,447	1,580	15,936	266,104	839	3,942	65,864
Chignik Area	3B	35	20	159	1,988	29	111	1,632	35	271	3,621	3	11	56
Lower Alaska Peninsula	3B	146	95	685	9,442	115	464	8,948	146	1,149	18,390	47	89	1,796
Subtotal, Area 3B		181	114	844	11,430	142	575	10,581	181	1,419	22,011	50	100	1,852
Eastern Aleutians—East	4A	67	38	355	4,972	50	459	7,844	67	814	12,816	25	200	2,714
Eastern Aleutians—West	4A	5	4	14	330	4	20	460	5	33	790	7	11	255
Subtotal, Area 4A		70	39	369	5,302	52	478	8,304	70	847	13,606	32	211	2,969
Western Aleutians—East	4B	9	9	12	280	6	15	257	9	27	537	6	0	0
Subtotal, Area 4B		9	9	12	280	6	15	257	9	27	537	6	0	0
St. George Island	4C	4	4	20	490	0	0	0	4	20	490	0	0	0
St. Paul Island	4C	7	4	35	346	4	11	812	7	46	1,158	0	0	0
Subtotal, Area 4C		11	8	55	836	4	11	812	11	66	1,648	0	0	0
St. Lawrence Island	4D	8	7	22	556	3	1	60	8	23	615	0	0	0
Subtotal, Area 4D		8	7	22	556	3	1	60	8	23	615	0	0	0
Bristol Bay	4E	10	5	0	0	10	34	403	10	34	403	3	0	0
Yukon Delta	4E	78	26	198	2,089	65	497	3,194	78	695	5,283	6	14	264
Norton Sound	4E	5	5	21	482	0	0	0	5	21	482	0	0	0
Subtotal, Area 4E		91	35	220	2,571	72	531	3,597	91	750	6,168	9	14	264
Total, Alaska^c		4,705	3,821	27,385	535,521	1,977	10,777	162,136	4,705	38,162	697,656	2,070	8,235	135,224

Source ADF&G Division of Subsistence SHARC survey, 2011.

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.

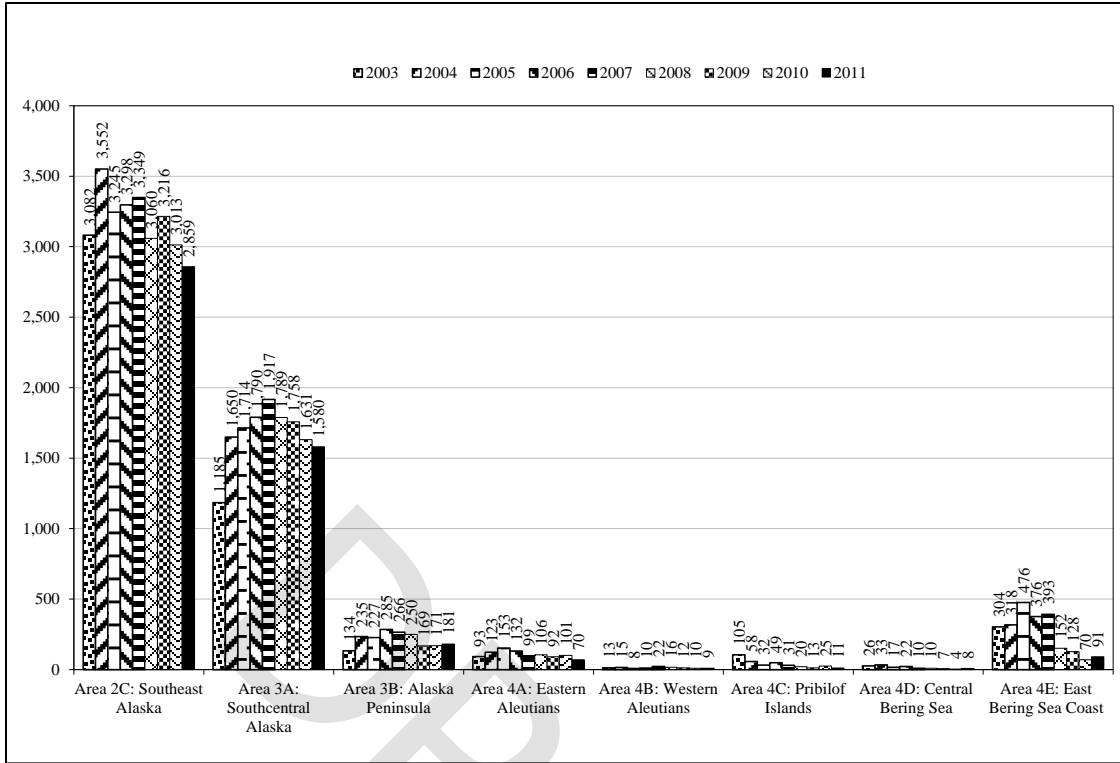


Figure 9.—Estimated number of Alaska subsistence halibut fishers, 2003–2011 by regulatory area fished.

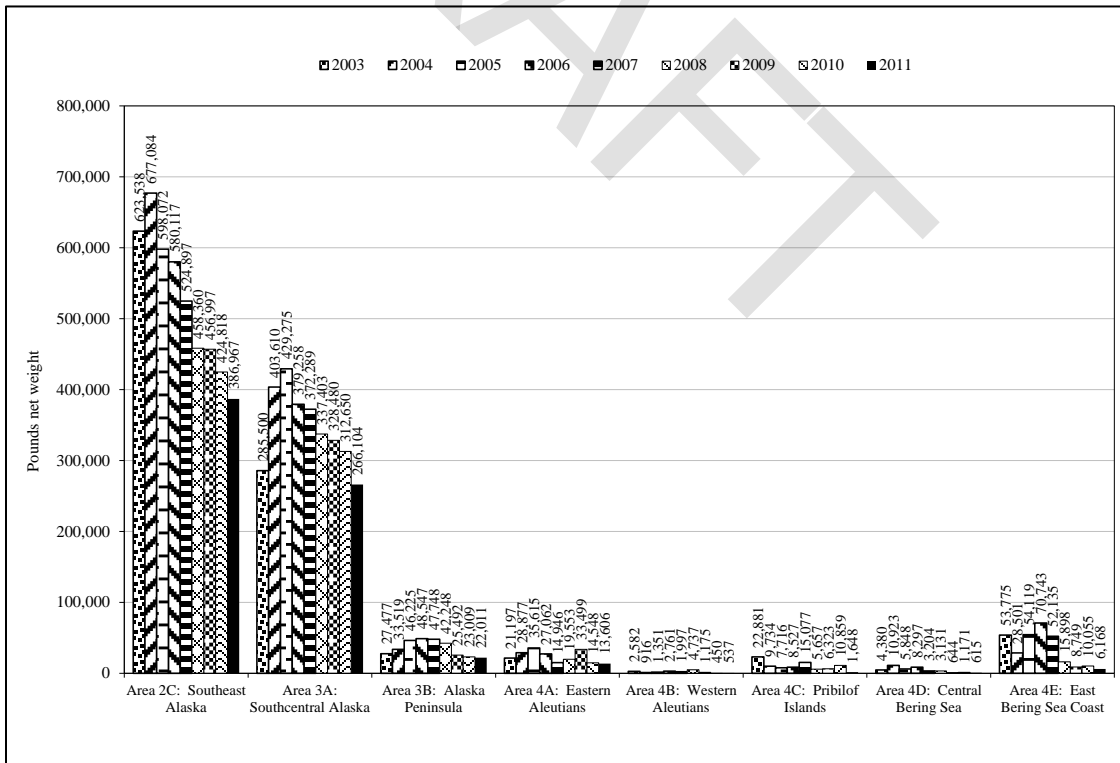


Figure 1.—Estimated subsistence halibut harvests, pounds net weight, by regulatory area fished, 2003–2011.

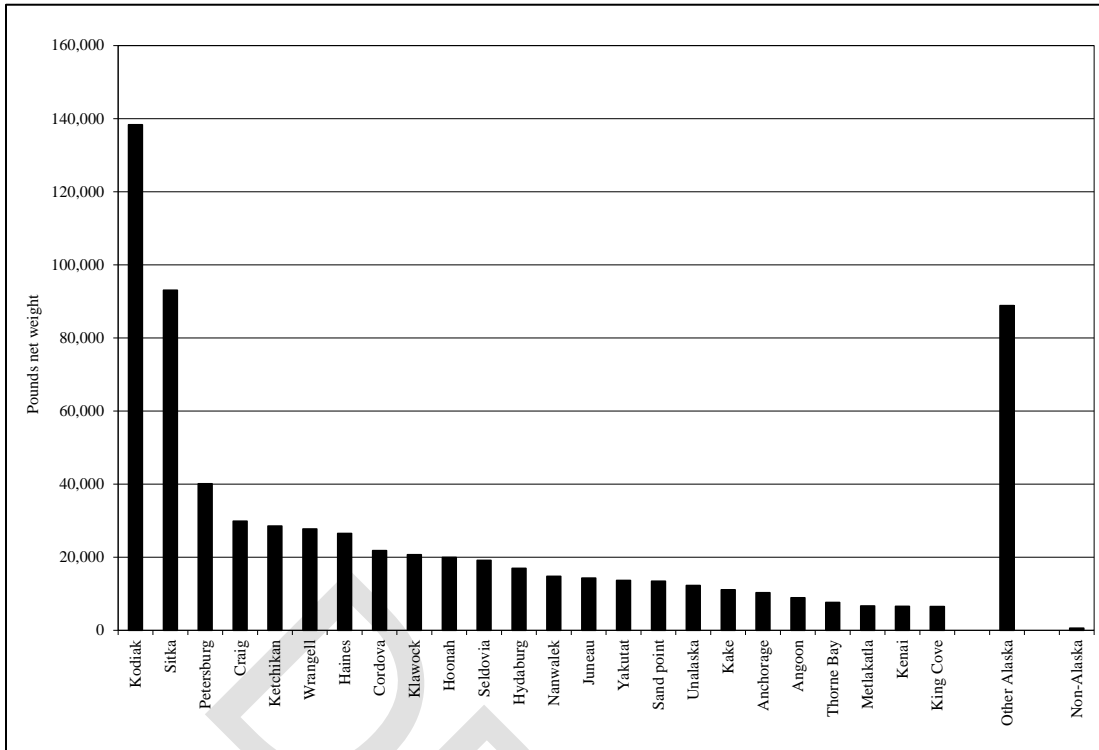


Figure 2.—Alaska subsistence halibut harvests by place of residence, 2011.

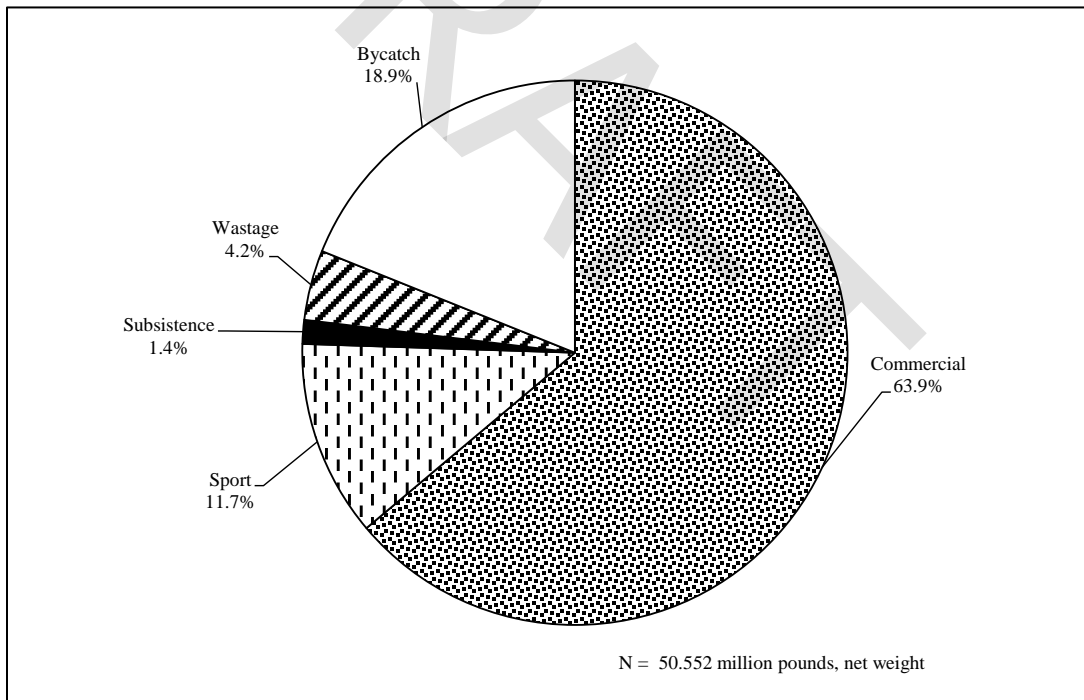


Figure 3.—Halibut removals, Alaska, 2011.

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Fall, James A. and David Koster. 2012. Subsistence Harvests of Pacific Halibut in Alaska, 2011. Alaska Department of Fish and Game, Division of Subsistence, Technical Paper No. 378 – Public Review Draft. Anchorage.

[DRAFT] EXECUTIVE SUMMARY

This report presents findings of a project designed to estimate the subsistence harvest of Pacific halibut *Hippoglossus stenolepis* in Alaska in 2011. The Alaska Department of Fish and Game (ADF&G) Division of Subsistence conducted the project under National Oceanic and Atmospheric Administration (NOAA) award number NA11NMF4370059 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 2011 was the ninth 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 2011, 11,145 individuals held SHARCs, compared to a high of 15,047 at the end of 2007 and a low of 10,953 at the end of 2010. The number of valid SHARCs in 2011 was 14% below the previous 8-year average.

Harvest information was collected by means of a postal (mailed) survey. The 1-page survey form was mailed to all SHARC holders in early 2012, with 2 follow-up mailings. Household visits supplemented the mailings in 5 communities in Southeast Alaska. In total, 7,589 surveys were returned, a response rate of 68%, the highest of any study year. Participation in the survey was voluntary.

According to the project findings, an estimated 4,705 individuals participated in the subsistence halibut fishery in 2011. This was the lowest number of participants since the SHARC program began. The previous low was 4,942 subsistence halibut fishers in 2003, and the highest estimate was 5,984 in 2004.

The estimated harvest in 2011 was 38,162 halibut ($\pm 2.8\%$) comprising 697,656 lb (net weight; $\pm 2.7\%$), the lowest totals for the 9 years of the project. (“Net weight” is 75% of “round” or live weight; the estimated harvest was 930,208 lb round weight.) This compares to an estimated high of 55,875 fish ($\pm 3.0\%$) comprising 1,178,222 lb ($\pm 3.0\%$) in 2005 and a previous low of 43,332 halibut comprising 797,560 lb ($\pm 3.4\%$) in 2010. As measured in pounds, the 2011 harvest was about 13% lower than the estimated harvest in 2010, and 31% lower than the previous 8-year average from 2003–2010.

Of the total subsistence halibut harvest in 2011, 535,521 lb (77%) were harvested with setline (stationary) gear (i.e., longlines, or “skates”) and 162,136 lb (23%) were harvested with hand-operated gear (i.e., rod and reel or handline). This was similar to the harvest by gear type in 2003–2010. Of those subsistence fishers using setline gear in 2011, the most (39%) 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 10,853 rockfish *Sebastes* spp. and 2,305 lingcod *Ophiodon elongatus* in 2011 while fishing for halibut. These were the lowest estimates for any year of the study. The highest estimated harvests were 19,001 rockfish and 4,407 lingcod in 2004 and previous low harvests were 12,395 rockfish and 2,355 lingcod in 2005.

Based upon fishing locations, the largest portion of the Alaska subsistence halibut harvest in 2011 occurred in Regulatory Area 2C (Southeast Alaska), 55% (386,967 lb); followed by:

- Area 3A (Southcentral Alaska), 38% (266,104 lb);
- Area 3B (Alaska Peninsula), 3% (22,011 lb);

- Area 4A (Eastern Aleutian Islands), 2% (13,606 lb);
- Area 4E (East Bering Sea Coast), 1% (6,168 lb);
- Area 4C (Pribilof Islands), less than 1% (1,648 lb);
- Area 4D (Central Bering Sea), less than 1% (615 lb); and
- Area 4B (Western Aleutian Islands), less than 1% (537 lb).

In 2003–2010 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 has ranged from an estimated high of 60% in 2003 to an estimated low of 51% in 2005 and 2007. Correspondingly, the portion occurring in Area 3A has ranged from an estimated high of 39% in 2010 to an estimated low of 27% in 2003.

Preliminary data from the International Pacific Halibut Commission (IPHC) combined with the findings of this project indicate that 50.552 million pounds (net weight) of halibut were removed from Alaska waters in 2011. Of this total, the subsistence harvest accounted for 1.4%. Commercial harvests took 63.9% of the halibut, followed by bycatch in other commercial fisheries (18.9%), sport harvests (11.7%), and wastage in the commercial fishery (4.2%).

This report describes the results of the ninth 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 2003–2011 fishing seasons serve as a basis for understanding the overall harvest, annual variability in catch, and trends in harvest since 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 2003–2011 is problematic, however, because of the limitations of earlier harvest estimates at the statewide level. The subsistence harvest estimates for 2003–2011 for some of the larger communities, such as Sitka, Petersburg, and Kodiak, which account for the majority of the harvest, are not markedly different from the range of 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 Alaska harvest in net pounds in 2008–2011 compared to the previous 5 years appears to be the result of fewer registered SHARC holders, fewer estimated participants in the fishery, lower average harvests per fisher, and a decline in the average size of the harvested halibut over the 9 years of the study, from 23.7 pounds per fish in 2003 to 18.3 lb per fish in 2011. In Area 4, substantial drops in SHARC registrations and survey responses may be resulting in an underestimate of subsistence halibut harvests in that area. 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 697,656 net pounds is a sound estimate of the Alaska subsistence halibut harvest in 2011. 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). The 2011 harvest estimate was 31% below the average for the previous 8 project years and continued a trend of lower statewide harvests that began in 2005. The causes of this decline in estimated harvests are complex, and there is no certainty that the trend will persist. 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.