Individual Fishing Quota Program Proposal to Allow IFQ halibut in Area 4A to be retained in IFQ sablefish pots

Discussion Paper

Develop a discussion paper to allow the retention of Area 4A halibut incidentally caught while targeting sablefish in the Bering Sea and Aleutian Island regulatory areas. Included in the discussion paper is the premise that sablefish pot tunnel regulations will not change in the BS/AI regulatory area and that this action has the objective of not increasing halibut bycatch levels.

Summary A proposal to change fishery regulations that define legal gear for retaining commercial Individual Fishing Quota (IFQ) halibut originally was submitted to the International Pacific Halibut Commission (IPHC) for its consideration at its January 2009 Annual Meeting. While the proposed action to define legal gear for halibut is under the management authority of the IPHC, it chose to consult with the North Pacific Council before it considered the proposed action.

The Council included this proposal under its 2009 call for IFQ/CDQ proposals after the IPHC forwarded the proposal, along with its own comments, for consideration by the Council. During its September 30, 2009 meeting, the IFQ Implementation Committee reviewed and recommended that the Council consider the proposal. In February 2010 the Council recommended that staff prepare a discussion paper, but ranked it lower than several other proposals for which the Council has since taken action. Council staff prepared a briefing on the status of the remaining four IFQ proposals under consideration by the Council in October 2011. The timing in scheduling Council review of this paper has been due to higher priorities that the Council has placed on other actions to manage halibut and groundfish fisheries, including Gulf of Alaska halibut prohibited species catch (PSC) limit reductions and the Pacific Halibut Catch Sharing Plan.

At its March 26, 2012 meeting, the committee reviewed the staff briefing paper on the status of the remaining proposals and recommended that that all proposals proceed for Council consideration. The Council ranked this discussion paper as its highest priority of the four remaining papers, in order to provide the requested guidance, if any, to the IPHC in time for its January 2013 Annual Meeting. At its December 2012 meeting the Council may provide guidance to the IPHC on its own consideration of this proposal. Should the IPHC choose to amend its definition of legal gear for halibut, a likely result would be the need for regulatory action initiated through the Council for amending regulations to require retention of IFQ halibut when caught in IFQ sablefish pots in a defined area that overlaps the two sets of regulatory areas (i.e., Area 4A for halibut and the Bering Sea and Aleutian Islands regulatory areas for sablefish). The Council may not intend for an expansion of the use of pot gear in the sablefish fishery to occur as a result of allowing the retention of IFQ halibut, but it could result in that unintended consequence. However, the increased use of pot gear may result in a decrease of unaccounted mortality by whale depredation on the gear[1].

At its December meeting the Council will consider whether to provide comments to the IPHC on the latter's consideration of the proposed action that is under its management authority. IPHC adoption of the proposal may require additional action by the Council and rulemaking by NMFS for complementary changes to Federal regulations.

Proposal Mr. Jay Hebert submitted a proposal on October 22, 2008 to the IPHC (Attachment 1). The proposer requests an experimental fishery to determine the results of allowing the retention of halibut caught as bycatch in pots in the sablefish fishery by IFQ holders of both halibut and sablefish in the sablefish regulatory area(s) that overlap with IPHC Regulatory Area 4A. The proposer intended to allow similar action as had been recently allowed in Area 2B (British Columbia), which allows coincident harvest and retention of halibut and sablefish in pot gear. Three primary objectives of the proposal are:

[1] Halibut discards in the sablefish pot fishery are counted as removals.

1) Increase the area of harvest of halibut in Area 4A. The proposer reports that there is a large portion of Area 4A that is not fished due to whale predation using longline gear. Pots can be used to more successfully harvest halibut.

2) Reduce halibut mortality from killer whale predation and handling by eliminating mortality due to handling released halibut.

3) Reduce concentrated halibut harvest in traditional "whale-free" areas as a result of increased presence (time and space) of whales. The proposed action would reduce pressure on the halibut resource and competition between vessels in the current limited area of successful halibut fishing.

Fishery affected

The proposal intends that the use of pots for retaining halibut be restricted to the sablefish IFQ fishery in the sablefish regulatory areas that overlap with IPHC Regulatory Area 4A. The Council clarified its intent, should it recommend to move this proposal forward, would be to allow halibut to be retained that are caught incidentally in this fishery only, and not to expand the use of pots to retain IFQ halibut in the Pacific cod (or other) pot fisheries.

Potentially affected participation

Of 208 persons holding Area 4A halibut IFQ in 2012, 80 persons also hold BS, AI, or WG sablefish IFQ. Of 176 vessels that are owned by holders of Area 4A halibut IFQ, 97 vessel owners also hold Bering Sea, Aleutian Islands, or Western Gulf of Alaska sablefish quota shares (this is the vessel ownership relationship and not what vessel fished the IFQs). There is no halibut allocation to the Community Development Quota (CDQ) Program in Area 4A, so the proposal only would apply to the IFQ fishery in that area. The RAM Report to the Fleet[2] provides the following information on vessel landings, TAC, harvest and percent of TAC harvested for the halibut and sablefish IFQ fisheries.

Table 2.1 2011 IFQ halibut allocations and fixed-gear IFQ landings

Species/Area	Vessel Landings[a]	Area IFQ TAC[b]	Total Harvest	Percent Harvested[c,d]
Halibut 2C	1,292	2,330,000	2,292,926	98
3A	1,898	14,360,000	14,265,007	99
3B	758	7,510,000	7,336,170	98
4A	296	2,410,000	2,286,068	95
4B	120	1,744,000	1,595,524	91
4C	21	845,000	104,808	12
4D	68	1,183,000	1,742,965	147
Total	***4,453***	***30,382,000***	***29,623,468***	***98***

[a] Vessel landings include the number of reported landings by participating vessels reported by IFQ regulatory area; each such landing may include harvests from multiple IFQ permitholders.
[b] Halibut weights are in net (headed and gutted) pounds.
[c] Due to over- or underharvest of TAC and rounding, percentages may not total 100 percent.
[d] Permitholders may fish IFQ designated for Area 4C in either Areas 4C or 4D. This resulted in an apparent, but allowable, "excessive harvest" in Area 4D.

[2] http://www.fakr.noaa.gov/ram/ifq/rtf11.pdf

Table 2.2 2011 IFQ sablefish allocations and IFQ landings

Species/Area	Vessel Landings[a]	Area IFQ TAC[b]	Total Harvest	Percent Harvested[c]
Sablefish AI	124	2,738,113	1,684,207	62
BS	204	2,513,244	1,055,427	42
CG	575	8,359,843	8,274,128	99
SE	540	6,481,524	6,452,159	100
WG	179	2,857,162	2,748,249	96
WY	216	3,844,822	3,827,053	100
Total	***1,838***	***26,794,708***	***24,041,223***	***90***

[a]Vessel landings include the number of reported landings by participating vessels reported by IFQ regulatory area. Each such landing may include harvests from multiple IFQ permitholders.
[b] Sablefish weights are in round pounds.
[c] Due to over-or underharvest of TAC and rounding, percentages may not total 100 percent.

Area affected

The area that would be affected by the proposal is limited to Area 4A; the IPHC staff recommended, and the committee concurred, that the proposed action not be expanded beyond this area. This would allow sablefish IFQ holders in either the Bering Sea area, Aleutian Islands area, or Western Gulf of Alaska area who also hold [sufficient] Area 4A halibut IFQ to retain halibut when using pot (single or longline) gear.

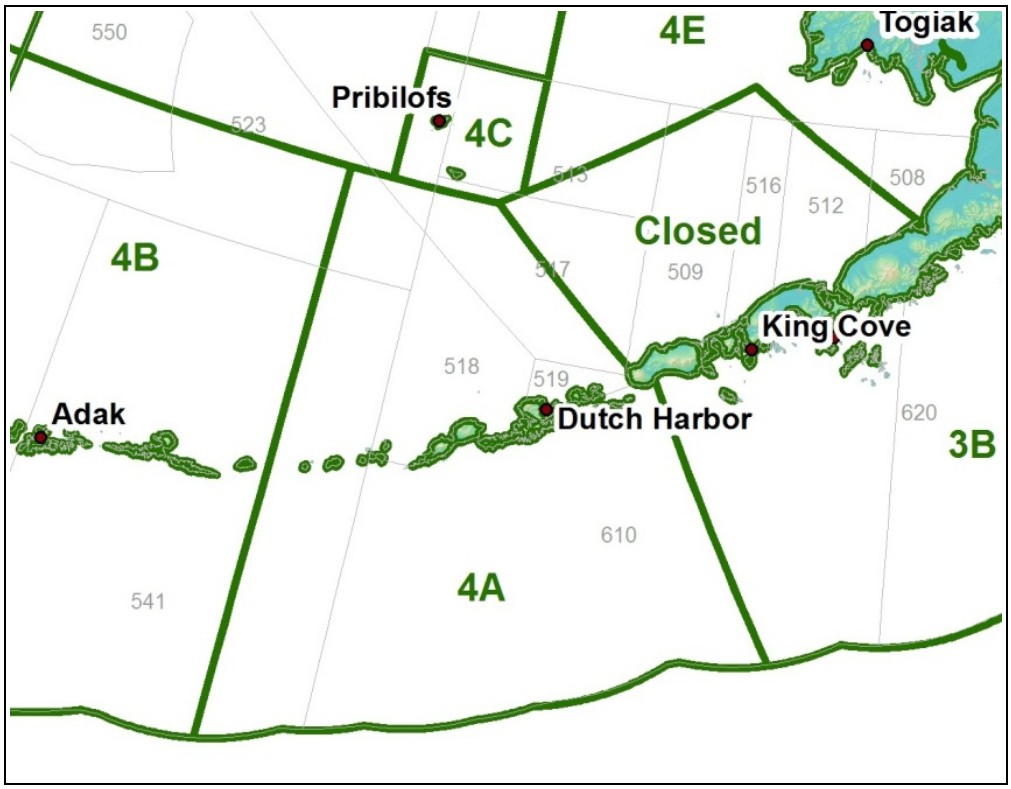

Figure 1 Overlap of IPHC halibut regulatory areas with BSAI groundfish (sablefish) regulatory areas (Source: NMFS). Area 4A overlays 630 (WG), 541 (AI) and multiple BS areas

Spatial distribution of halibut and sablefish harvest in affected area Figure 2 (percent) and Figure 3 (number) (in Attachment 2) show the distribution of IFQ sablefish pot landings (blocks) with halibut bycatch (vertical bars). The highest amounts in percent and numbers of both sabelfish and halibut catch appears closest to the port of Dutch Harbor. Additional figures under Attachment 2 show the relationship between sabelfish pot landings, and halibutbycatch, by month in the IFQ season.

IPHC staff comments The IPHC staff provided the following comments to the Council in a letter dated September 24, 2009 (Attachment 3), which accompanied transmittal of the proposal to the Council. The potential management issues identified in the comments still apply.

> The IPHC staff is not opposed to allowing pot gear in Area 4A from a biological point of view. However, if the pot catch of halibut is sufficiently large enough, we would need to determine a pot gear selectivity curve for halibut for our stock assessment in order to account for that removal. Additionally, NMFS/RAM regulations would need to require full retention of halibut if the vessel has halibut IFQ and is using pot gear, similar to the regulation for longline gear. Also, IPHC regulations define legal gear by IPHC regulatory area but IPHC regulatory areas and NMFS sablefish areas are not concurrent. NOAA Enforcement would also need to provide feedback on location restrictions and may require that the vessel be transmitting with a Vessel Monitoring System transmitter.
>
> The IPHC staff could not agree to allow pot gear coast-wide or an expansion to this proposal, without an understanding of the magnitude and impacts of catch in the pot fishery. The issues that the Council and Commission should consider include gear conflicts, creation of a new halibut fishery, redistribution of catch by gear, fish quality, and potential for future requests for expansion to winter cod fisheries.

Committee recommendations The IFQ Implementation Committee determined that this issue had a higher priority than most others, during its September 2009 review of IFQ/CDQ proposals[3]. It identified conservation and utilization issues in placing its priority. The committee noted that whale depredation has increased in the area due to discarded halibut bycatch in IFQ sablefish pot gear and expressed its concern that the bycatch mortality rate of halibut may be increasing due to whale depredation. Recognizing the potential for this provision to be misused (i.e., an increase of incidence of halibut bycatch in IFQ sablefish pots by strategic placement of pots or use of bait), the committee recommended that the paper explore mechanisms that would ensure that the halibut effects of the proposed action, without allowing for an increase in resultant halibut mortality. From the March 2012 IFQ Committee minutes[4]:

> "The committee discussed the area for which the proposed action should be considered. While the proposal was specific to Area 4A because that is where the halibut predation occurred then, the committee noted that the same whale depredation problem also occurs in Area 4B. Heather Gilroy noted that the IPHC supported considering the proposed action in Area 4A, but not expanding the geographic range further. IPHC would need to collect new selectivity data if the area for the action was expanded. Heather reminded the committee that the proposed action is under IPHC authority to define legal gear for the retention of Pacific halibut, but that the IPHC wished to consult with the Council, as the proposed action would affect management of the sablefish IFQ fishery. Jane DiCosimo noted that the staff analysis would not be in the form of an RIR/IRFA because no regulatory action would be needed, so that minimized the distinction between a discussion paper and an analysis. Depending on other Council tasking priorities, she could bring back an analysis for the Council to consider recommending the proposed action in either October or December, so that the IPHC could take action at its next annual meeting in January 2013.

[3] http://www.alaskafisheries.noaa.gov/npfmc/PDFdocuments/halibut/Minutes30Sep09.pdf and http://www.alaskafisheries.noaa.gov/npfmc/PDFdocuments/halibut/Motions9_30_09.pdf

[4] http://www.alaskafisheries.noaa.gov/npfmc/PDFdocuments/halibut/Implementation/IFQImpCmte312_Minutes.pdf

> The committee recommended moving forward with an analysis of the proposed action, but requested that staff identify the latitude and longitude for the geographic boundaries for which: 1) Area 4A only, and 2) Area 4A and 4B overlap the Bering Sea management area and the Aleutian Island management area for sablefish. [A committee member] noted similar concerns about pot configurations, pot storage, deadloss, etc. that are also identified under Proposal 2."

The Advisory Panel took no action on this proposal.

Previous Council actions affecting the use of pots in IFQ sablefish fisheries[5]

Amendment 14 to the GOA Fishery Management Plan banned the use of pots for fishing for sablefish in the GOA, effective 18 November 1985, starting in the Eastern area in 1986, in the Central area in 1987, and in the Western area in 1989. An earlier regulatory amendment was approved in 1985 for 3 months (27 March - 25 June 1985) until Amendment 14 was effective. A later regulatory amendment in 1992 prohibited longline pot gear in the BS (57 FR 37906). The prohibition on sablefish longline pot gear use was removed for the BS effective 12 September 1996, except from 1 to 30 June to prevent gear conflicts with trawlers during that month. Sablefish longline pot gear is allowed in the AI.

Regulatory process/timing

The IPHC may redefine legal gear to include pot gear (single and longline since there is a single gear code for both configurations) for halibut in Area 4A at its January 2013 Annual Meeting, as part of its action to adopt annual measures for 2013. Current IPHC gear regulations are excerpted below. The language suggests that additional action by NMFS to amend Federal regulations may be necessary; staff plans to provide additional clarification on whether rulemaking would be required during consideration of this proposal. It is unlikely that the Council and NMFS could complete an analysis and rulemaking in time even for the 2014 fishing season, unless the Council explicitly made this action a higher priority than other rulemakings already in development. The Council may choose to direct staff to develop the required analyses and rulemakings independent of the Council process in order to expedite implementation (but it still would be unlikely to be implemented for 2014), if it feels it had sufficient information to recommend a preferred alternative. The Council has given this direction on other IFQ amendments.

19. Fishing Gear

(1) No person shall fish for halibut using any gear other than hook and line gear, except that vessels licensed to catch sablefish in Area 2B using sablefish trap gear as defined in the Condition of Sablefish Licence can retain halibut caught as bycatch under regulations promulgated by the Canadian Department of Fisheries and Oceans.

Current fishery information[5]

Bycatch and discards in all gear types

Prohibited species catches (PSC) in the targeted sablefish fisheries are dominated by halibut (1,060 t/year) and golden king crab (134,000 individuals/year) for both the BSAI and GOA; more detailed analysis in the affected area of the proposed action follows later in the paper. Overall, halibut catches seem to be decreasing, while catches of golden king crab are highly variable from year to year, probably as a result of low sampling effort in BSAI sablefish pot fisheries (Table 3.6 in the 2012 Groundfish SAFE Reports).

[5] http://www.afsc.noaa.gov/refm/stocks/plan_team/BSAIsablefish.pdf; the original table numbers are retained to provide reference to the source document

Table 3.6. Prohibited Species Catch (PSC) estimates reported in tons for halibut and herring, thousands of animals for crab and salmon, by year, and fisheries management plan (BSAI or GOA) area for the sablefish fishery.
Source: NMFS AKRO Blend/Catch Accounting System PSCNQ via AKFIN, October 12, 2012.

	2008			2009			2010			2011			Average
	BSAI	GOA	Total	BSAI	GOA	Total	BSAI	GOA	Total	BSAI	GOA	Total	
Hook and Line													
Bairdi Crab	0.00	0.01	0.01	0.03	0.24	0.28	0.00	0.07	0.07	0.00	0.00	0.00	0.09
Golden K. Crab	0.17	0.08	0.25	0.32	0.03	0.35	0.97	0.00	0.97	0.50	0.13	0.63	0.55
Halibut	151	953	1,104	186	1,023	1,209	220	760	980	135	813	948	1,060
Other Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Opilio Crab	0.01	0.23	0.24	0.01	0.21	0.22	0.00	0.16	0.16	0.00	0.29	0.29	0.23
Red K. Crab	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.02	0.00	0.02	0.02
Other													
Bairdi Crab	0.14	0.18	0.32	1.65	0.08	1.74	0.00	0.06	0.06	0.94	0.00	0.00	0.53
Golden K. Crab	182	0	182	139	0	139	26	0	26	191	0	191	134
Halibut	28	7	35	17	3	20	39	4	43	17	6	23	30
Herring	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Other Salmon	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00
Opilio Crab	0.25	0.00	0.25	0.01	0.10	0.11	2.15	0.03	2.18	0.33	0.00	0.33	0.72
Red K. Crab	0.42	0.00	0.42	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.41	0.21

The following is provided to place the halibut PSC data in context with other bycatch amounts. Table 3.4 in the 2012 Groundfish SAFE Reports shows groundfish bycatch in the sablefish target fishery. The largest bycatch is arrowtooth flounder (534 t/year, 456 t discarded). Arrowtooth is the only species that has substantial catch from non-longline gear. Shortspine thornyhead and shortraker rockfish are the 2nd and 3rd most caught species at 366 t/year and 207 t/year. The next three groups are "Other Species", GOA "Other Skate", and GOA longnose skate which total 415 t/year. Giant grenadiers, a non-target species that is not in either FMP, make up the bulk of the nontarget species bycatch, peaking at 9,315 t in 2007, but decreasing since with a 2011 catch of 6,652 t (Table 3.5 in the 2012 Groundfish SAFE Reports). Other nontarget catches that have totals over a ton per year are corals, snails, sponges, sea stars, and miscellaneous fishes and crabs.

Table 3.4. Bycatch (t) of FMP Groundfish species in the targeted sablefish fishery averaged from 2007-2011. Other = Pot and trawl combined because of confidentiality. Other Species is 2007-2010, and Sharks is only 2011. Source: NMFS AKRO Blend/Catch Accounting System via AKFIN, October 12, 2012.

	Hook and Line			Other Gear			All Gear		
Species	Discard	Retained	Total	Discard	Retained	Total	Discard	Retained	Total
Arrowtooth Flounder	320	66	385	137	12	148	456	78	534
Thornyhead rockfish	49	292	341	3	21	25	53	313	366
Shortraker Rockfish	81	93	173	7	26	34	89	119	207
Other Species	180	2	181	3	1	4	183	3	185
GOA Other Skate	135	4	139	1	0	1	137	4	141
GOA Longnose Skate	119	4	122	2	1	3	121	5	126
Other Rockfish	41	77	118	2	1	4	43	78	121
Greenland Turbot	37	54	91	16	2	18	53	56	109
Rougheye Rockfish	38	57	99	16	4	20	54	60	119
Pacific Cod	25	58	83	1	7	8	26	65	91
Shark	234	0	234	1	0	1	235	0	235
GOA Deep Water Flatfish	8	0	8	15	4	19	24	4	28
Pacific ocean perch	7	0	7	2	16	18	9	16	25
BSAI Skate	18	0	18	0	-	0	18	0	18
BSAI Shortraker Rockfish	8	8	15	0	0	0	8	8	16
GOA Demersal Shelf Rockfish	0	11	11	-	-	-	0	11	11
BSAI Other Flatfish	7	2	9	1	0	1	8	2	10
Pollock	0	0	1	5	3	9	5	4	9
GOA Shallow Water Flatfish	7	1	8	1	0	1	8	1	9
GOA Rex Sole	0	0	0	5	3	8	5	3	8
Total	1,315	728	2,046	220	102	322	1,535	830	2,369

Table 3.5. Bycatch of nontarget species and HAPC biota in the targeted sablefish fishery. Source: NMFS AKRO Blend/Catch Accounting System via AKFIN, October 12, 2012. Conf. = confidential.

	Estimated Catch (t)					
Group Name	2006	2007	2008	2009	2010	2011
Benthic urochordata	0.08	0.00	-	0.01	0.12	0.13
Birds	0.91	1.59	0.55	0.40	0.35	1.43
Bivalves	0	Conf.	-	0	0.00	0.06
Brittle star unidentified	0.05	0.10	0.06	0.33	0.10	0.38
Corals Bryozoans	1.57	0.16	1.56	1.62	2.45	4.90
Dark Rockfish	-	-	Conf.	0	Conf.	-
Eelpouts	1.30	2.26	9.04	1.76	1.34	0.54
Eulachon	-	0	Conf.	0	Conf.	-
Giant Grenadier	4,030	9,315	8,897	5,369	4,402	6,652
Greenlings	-	76	0.02	0.02	-	0
Grenadier	4,907	109	128	961	749	810
Hermit crab unidentified	0.05	0.05	0.07	0.09	0.19	0.21
Invertebrate unidentified	0.07	0.02	0.01	0.42	0.76	1.88
Misc crabs	0.47	1.12	0.94	3.20	1.90	1.16
Misc crustaceans	-	-	-	2	0.00	0.00
Misc deep fish	0	0.00	-	0	-	0
Misc fish	18.34	17.10	21.19	4.72	4.01	7.96
Misc inverts (worms etc)	0	Conf.	0	0.01	0.00	0.00
Other osmerids	-	-	Conf.	-	-	-
Pandalid shrimp	0	0.00	0.00	0.01	0.00	0.00
Polychaete unidentified	-	-	0	0.00	0.00	0.00
Scypho jellies	0.10	0.00	Conf.	0	0	1
Sea anemone unidentified	0.29	3.34	0.69	1.99	1.32	3.06
Sea pens whips	0.19	0.08	0.32	0.49	0.03	1.52
Sea star	5.23	35.29	1.56	2.45	2.53	3.24
Snails	9.41	8.09	6.43	11.22	11.56	19.70
Sponge unidentified	0.71	0.16	14.65	1.92	0.76	1.99
Urchins, dollars, cucumbers	0.15	0.14	0.48	1.03	0.55	0.24

Discard mortality rates A discard mortality rate (DMR) for the CDQ sablefish pot fishery has been specified, but not for the open access fishery (Table 8). The lack of a DMR suggests a lack of data. An examination of all 2011 observed pot hauls (n=768) were coded with a Pacific cod target. There were only 8 hauls made over 200 f in depth, and none had sablefish reported in them.

Table 8. Recommended Pacific halibut discard mortality rates (DMRs) for 2013-2015 CDQ and non-CDQ groundfish fisheries off Alaska.

I. Non-CDQ

Bering Sea/Aleutians			Gulf of Alaska		
Gear/Target	Used in 2010-2012	2013-2015 Recommendation	Gear/Target	Used in 2010-2012	2013-2015 Recommendation
Trawl			***Trawl***		
Atka mack	76	77	Bottom poll	59	60
Bottom poll	73	77	Pacific cod	62	62
Pacific cod	71	71	Dpwtr flats	48	43
Other Flats	72	71	Shallwtr flats	71	67
Rockfish	81	79	Rockfish	67	66
Flathead sole	74	73	Flathead sole	65	65
Midwtr poll	89	88	Midwtr poll	76	71
Rock sole	82	85	Sablefish	65	71
Sablefish	75	75	Arr. fldr	72	73
Turbot	67	64	Rex sole	64	69
Arr. fldr	76	76			
YF sole	81	83			
Pot			***Pot***		
Pacific cod	8	8	Pacific cod	17	17
Longline			***Longline***		
Pacific cod	10	9	Pacific cod	12	11
Rockfish	9	4	Rockfish	9	9
Turbot	11	13			

II. Bering Sea/Aleutians CDQ

Gear/Target	Used in 2010-2012	2013-2015 Recommendation
Trawl		
Atka mackerel	85	86
Bottom pollock	85	83
Pacific cod	90	90
Rockfish	84	80
Flathead sole	84	79
Midwtr pollock	90	90
Rock sole	87	88
Turbot	88	89
Yellowfin sole	85	86
Pot		
Sablefish	32	34
Longline		
Pacific cod	10	10
Turbot	4	4

Whale depredation on sablefish Killer whale depredation of the NMFS longline survey's sablefish catches has been a problem in the BS since the beginning of the survey. Killer whale depredation primarily occurs in the eastern BS, AI, and Western GOA and to a lesser extent in recent years in the Central GOA. Depredation is easily identified by reduced sablefish catch and the presence of lips or jaws and bent, straightened, or broken hooks. Since 1990, portions of the gear at stations affected by killer whale depredation during the domestic longline survey have been excluded from the analysis of catch rates, RPNs, and RPWs. Killer whale depredation has been fairly consistent since 1996, which corresponds to when the AI and the BS were added to the survey (Table 3.11 in the 2012 Groundfish SAFE Reports). A high of ten BS stations were depredated in 2009, which significantly impacted catch and biased the abundance index leading to using the 2007 BS RPN estimate to interpolate the 2009 and 2010 BS RPNs (Hanselman et al. 2009). In 2011, depredation levels in the BS were similar to previous years with catches at 7 of 16 stations affected. There was higher depredation in the AI in 2012 than most years (5 of 14 stations).

Table 3.11. Count of stations where sperm (S) or killer whale (K) depredation occurred in the six sablefish management areas. The number of stations sampled that are used for RPN calculations are in parentheses. Areas not surveyed in a given year are left blank. If there were no whale depredation data taken, it is denoted with an "n/a". Killer whale depredation did not always occur on all skates of gear, and only those skates with depredation were cut from calculations of RPNs and RPWs.

	BS (16)		**AI (14)**		**WG (10)**		**CG (16)**		**WY (8)**		**EY/SE (17)**	
Year	**S**	**K**	**S**	**K**	**S**	**K**	**S**	**K**	**S**	**K**	**S**	**K**
1996			n/a	1	n/a	0	n/a	0	n/a	0	n/a	0
1997	n/a	2			n/a	0	n/a	0	n/a	0	n/a	0
1998			0	1	0	0	0	0	4	0		0
1999	0	7			0	0	3	0	6	0	4	0
2000			0	1	0	1	0	0	4	0	2	0
2001	0	5			0	0	3	0	2	0	2	0
2002			0	1	0	4	3	0	4	0	2	0
2003	0	7			0	3	2	0	1	0	2	0
2004			0	0	0	4	3	0	4	0	6	0
2005	0	2			0	4	0	0	2	0	8	0
2006			0	1	0	3	2	1	4	0	2	0
2007	0	7			0	5	1	1	5	0	6	0
2008			0	3	0	2	2	0	8	0	9	0
2009	0	10			0	2	5	1	3	0	2	0
2010			0	3	0	1	2	1	2	0	6	0
2011	0	7			0	5	1	1	4	0	9	0
2012			1	5	1	5	2	0	4	0	3	0

Sperm whale depredation affects longline catches in the GOA, but evidence of depredation is not accompanied by obvious decreases in sablefish catch or common occurrence of lips and jaws or bent and broken hooks. Data on sperm whale depredation have been collected since the 1998 longline survey (Table 3.11). Sperm whales are often observed from the survey vessel during haulback but do not appear to be depredating on the catch. Sperm whale depredation during the longline survey is recorded at the station level and is defined as sperm whales being present during haulback with the occurrence of damaged sablefish in the catch. Sperm whales are most commonly observed in the Central and Eastern GOA, with the majority of depredation occurring in the West Yakutat and East Yakutat/Southeast areas. Depredation has been variable since 1998.

Multiple studies have attempted to quantify sperm whale depredation rates. An early study using data collected by fisheries observers in Alaskan waters found no significant effect on the commercial fishery catch. Another study using data collected from commercial vessels in southeast Alaska, found a small, significant effect comparing longline fishery catches between sets with sperm whales present and sets with sperm whales absent.

Previous investigations on the use of pots in the sablefish IFQ fishery In December 2005, the Council requested that the AFSC Auke Bay Laboratory scientists investigate a number of issues related to management of the sablefish pot fishery in the Bering Sea and Aleutian Islands that had been raised as part of a previous call for IFQ/CDQ proposals. These findings were first reported in the 2008 sablefish stock assessment[6] and are incorporated into this paper as additional background information regarding the use of sablefish pot gear and its deployment.

Description of the sablefish IFQ pot fishery

Pot fishing in the IFQ fishery is not allowed in the GOA but is legal in the BSAI regions. In 2000, the pot fishery accounted for less than ten percent of the fixed gear sablefish catch in these areas but effort has increased substantially since, in response to killer whale depredation. Since 2004, pot gear has accounted for over 50% of the BS fixed gear IFQ catch and up to 34% of the catch in the AI. Pot fishing for sablefish has increased in the BS and AI as a response to depredation of longline catches by killer whales (Table 3.2). Pots are longlined with approximately 40-135 pots per set.

Table 3.2. Catch (t) in the Aleutian Islands and the Bering Sea by gear type. Both CDQ and non-CDQ catches are included. Catches in 1991-1999 are averages. 2012 catch as of September 29, 2012 (www.akfin.org).

Aleutian Islands				
Year	Pot	Trawl	Longline	Total
1991-1999	6	73	1,210	1,289
2000	103	33	913	1,049
2001	111	39	925	1,074
2002	105	39	975	1,119
2003	316	42	761	1,120
2004	384	32	539	955
2005	688	115	679	1,481
2006	458	60	614	1,132
2007	632	40	476	1,149
2008	177	76	647	900
2009	78	75	943	1,096
2010	59	74	943	1,076
2011	141	47	831	1019
2012	36	140	708	884
Bering Sea				
1991-1999	5	189	539	733
2000	40	284	418	742
2001	106	353	405	864
2002	382	295	467	1,144
2003	355	231	413	999
2004	432	293	312	1,038
2005	590	273	202	1,064
2006	584	84	368	1,037
2007	878	92	203	1,173
2008	754	183	199	1,135
2009	557	93	240	891
2010	452	30	272	754
2011	405	44	246	695
2012	295	87	177	559

[6] http://www.afsc.noaa.gov/refm/docs/2008/BSAIsablefish.pdf

Pot catch rates: There is more uncertainty in catch rates from 1999-2004 because there were few observed vessels during this period. From 2005-2007 the average catch rate was 23.8 lbs/pot in the Aleutian Islands and the Bering Sea. However, because there were still relatively few vessels observed in 2005-2007 there was high variability in the average catch rates. Because of the high variability, catch rates within areas were not significantly different between any years in both the observer and logbook data. For both the Bering Sea and Aleutian Islands, no trend in catch rates is discernible. The composition of species caught in pots in the Bering Sea and the Aleutian Islands was similar in 2005. Sablefish comprised most of the catch by weight (Bering Sea = 60%, Aleutian Islands = 69%) and the next most abundant fish by weight was arrowtooth flounder (Bering Sea = 13%, Aleutian Islands = 10%). Other species of fish and invertebrates contributed no more than 6% each to the total catch weight.

Pot spatial and temporal patterns: Seasonal changes in effort were examined in the 2007 SAFE Report, but no distinct trends were found.

Pot length frequencies: The authors compared the length frequencies recorded by observers from the 2006-2008 longline and pot fisheries. The average length of sablefish in the Aleutian Islands and in the Bering Sea was smaller for sablefish caught by pot gear (63.8 cm) than longline gear (66.0 cm), but the distributions indicate that both fisheries focus primarily on adults. Pot and longline gear is set at similar depths in the Aleutians and Bering Sea and sex ratio of the catch is 1:1 in both gears. The authors do not believe that the difference in lengths is significant enough to affect population recruitment and did not see any indication that undersized fish were being selected by pots.

Sablefish diets in pots: One concern was the possibility of cannibalism by larger sablefish while in pots. Because few small sablefish are found in pots, there was concern that small sablefish were entering the pots and being cannibalized by larger sablefish.

A total of 257 sablefish stomachs were examined during 2006 and 2007 at sea and in plants in Dutch Harbor, AK. Of these sablefish, 80% were females (attributed to selecting fish greater than 65 cm). A total of 72% of the stomachs sampled were empty. The prey item that occurred most commonly was squid (13%), followed by miscellaneous small prey <15 cm (10%), vertebrae and unidentified digested fish (3%), forage fish (2%), and crab (1%). Some of the squid in the stomachs were noted to be bait from the pots. Miscellaneous small prey included brittle stars and unidentified small prey. The frequency of prey occurrence (out of 257 stomachs) is detailed in the figure below.

No sablefish were found in the stomachs of large pot-caught sablefish. Several caveats exist to these results. The authors were not provided with the soak time of these pots, so it is possible some of the vertebrae were from digested sablefish. However, sablefish in a benthic environment would likely be at least 35 cm (age 2+) and would take some time to digest to the point of becoming unidentifiable vertebrae. In addition, some stomach contents may have been regurgitated when the pots were retrieved. However, because no sablefish were present in the stomach samples, cannibalism in pots either does not occur or is a rare event.

Pot soak times: In 2006, some questions were raised about storing pots at sea, escape rings and biodegradable panels. While the authors have not analyzed the consequences of these potential regulatory issues, in 2006 the authors examined the soak times of the observed pot sets. These plots are shown in the SAFE Report.

In an experiment examining escape mechanisms for Canadian sablefish, control traps had only 5% mortality up to 10 days; in the current fishing environment, 90% of the pot sets were soaked for 7 days or fewer.

Pot sample sizes: Sablefish pot fishing has increased dramatically in the Aleutian Islands and the Bering Sea since 1999. In 2007, pot gear accounted for 81% of the Bering Sea fixed gear IFQ catch and 56% of the catch in the Aleutians. Fishery catch and effort data for pot gear are available from observer data since 1999; however, due to confidentiality agreements, the authors cannot present these data due to low

sample sizes. Pot fishery data are also available from logbooks since 2004; however, these data are also sparse. The number of observed sets and the number of pots fished increased dramatically in 2005 and remained high through 2007. The number of logbook pot sets has continued to increase in the Bering Sea and has stayed consistent in the Aleutian Islands. Over all years, the average number of pots used per set was 78.

Contributors

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Attachment 1 Proposal

Proposal #1

Proposal: Allowing the retention of coincidentally harvested Halibut during the Bering Sea Sablefish Pot Fishery

Year(s): Effective spring 2009, for a three year trial/evaluation period

Definition and Objective:

This proposal is to allow the retention of incidental by catch Halibut, specifically caught in the Bering Sea Sablefish fishery, by pot, by qualified harvesters that have 4A Halibut quota. This proposal is very much the same as the recently passed regulatory change in area 2B. There are 3 primary objectives to this proposal. 1) Increase the area of harvest in 4A, 2)reduce mortality from Killer whale predation and handling, and 3) Reduce concentrated harvest in traditional "whale-free" areas.

1) Currently there is a very large portion of 4A that is not reasonable to attempt harvesting Halibut from because of Killer whale predation. Pots have been successful in safely capturing these fish, with no mortality from predation.

2) Under the current regulations, all Halibut caught by Sablefish pots must be discarded. Because of where the majority of the Bering Sea Sablefish Pot fishery is conducted, there is a constant presence of Killer whales near harvesting vessels . There is no mechanism by which halibut can be safely returned, without extremely high mortality. Mortality from handling would be completely eliminated.

3) Because of the increased presence of Killer whales in 4A, harvesters have been forced into ever increasingly small areas of harvest, with limited windows of opportunity to harvest. Allowing these specified pot vessels to retain their by-catch reduces both pressure on the resource and direct competition between vessels, lessening focused impact on the resource, and significantly increasing the area of harvest.

Impacts:

All vessels fishing with hooks will see some small measure of relief from this proposal, simply because: a) some of the fish would , with this proposal, be harvested from regions that are not being currently exploited, b) Halibut caught by pot, landed and recorded, would directly increase the availability , by reducing competitive pressure, and direct and indirect mortality issues

Opinion:

We have had 7 years of Sablefish fishing, by pot, in the Bering Sea to witness changing events. The Killer whale predation problem is increasing. Cows are teaching their calves the "technique" of stripping fish and following in to snatch by catch as quickly as it is discarded. When we discard Halibut, we are destroying the fish. We can't change the whales feeding habits, but we can change their access to Halibut in particular. I believe all vessels engaged in Sablefish fishing in the Bering Sea should be required to have some Halibut quota for 4A, specifically to cover the inevitable by catch of Halibut.

For a significant portion of the year, Halibut and Sablefish share intermingled climes on the ocean bottom. Traditional halibut surveys do not get to these regions. To pursue Sablefish will forever take us through regions of Halibut as the two species compete for food. Recognizing this interrelationship, I am proposing that we retain both.

Attachment 2. Plots of halibut in sablefish pots,

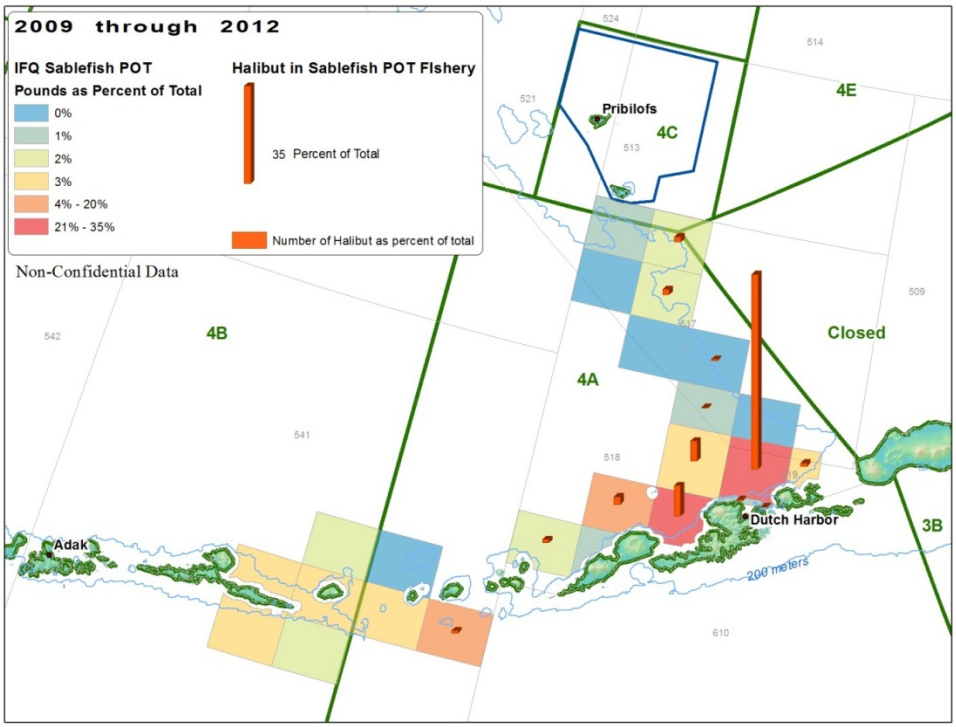

Figure 2 Number of halibut as a percent of total (summed over 2009-2012) halibut caught incidentally in IFQ sablefish fishery in pot gear.

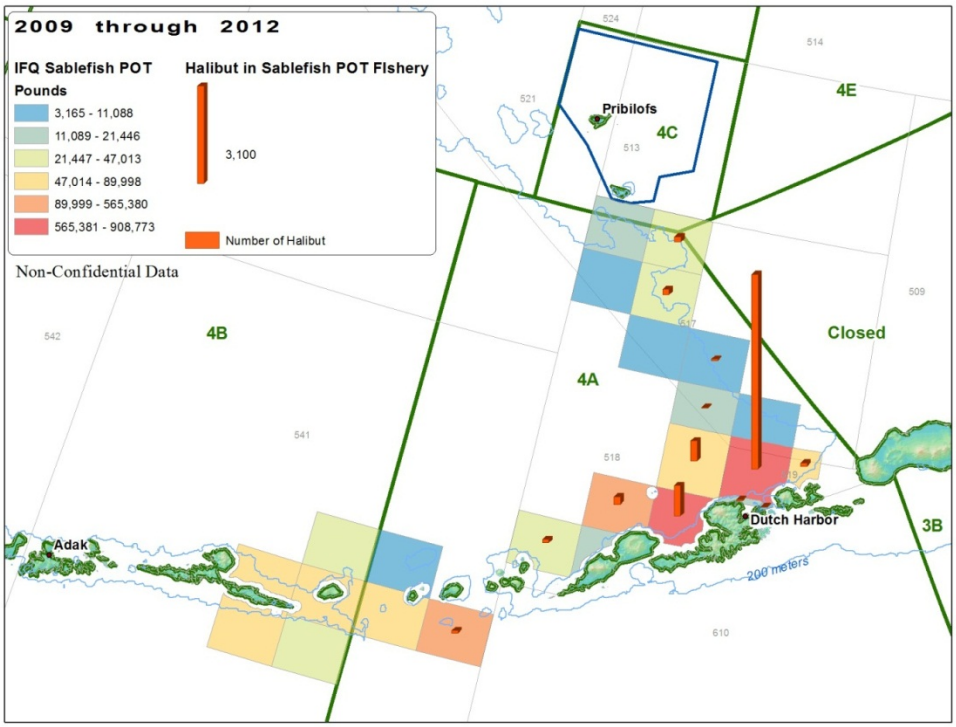

Figure 3 Number of total halibut (summed over 2009-2012) caught incidentally in IFQ sablefish fishery in pot gear.

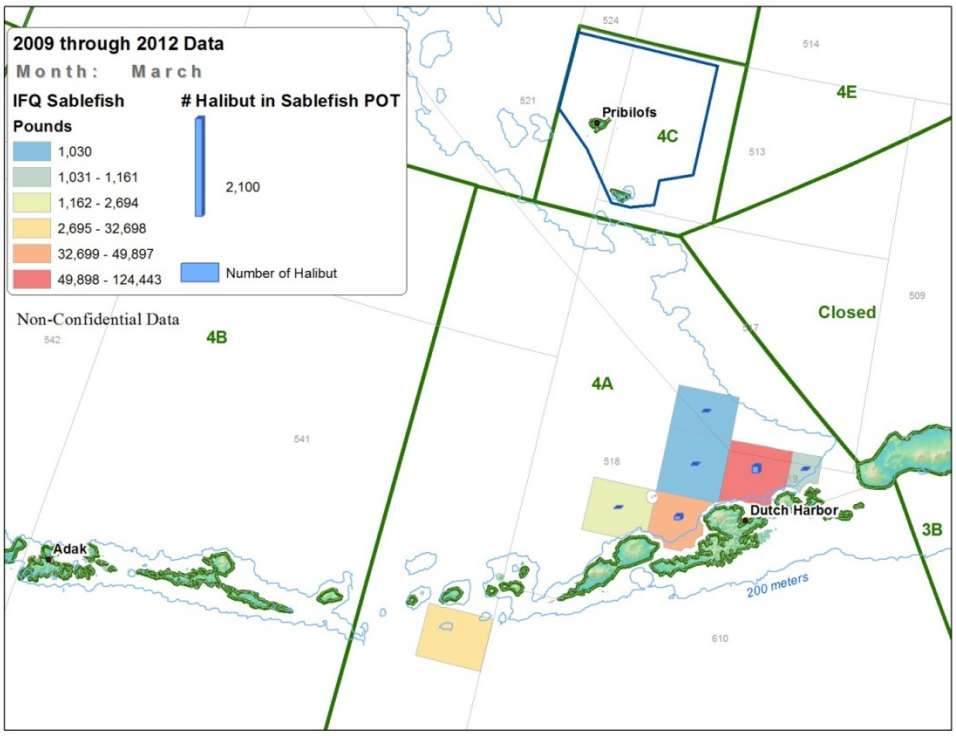

Figure 4 Number of total halibut (summed over 2009-2012) caught incidentally in IFQ sablefish fishery in pot gear by month.

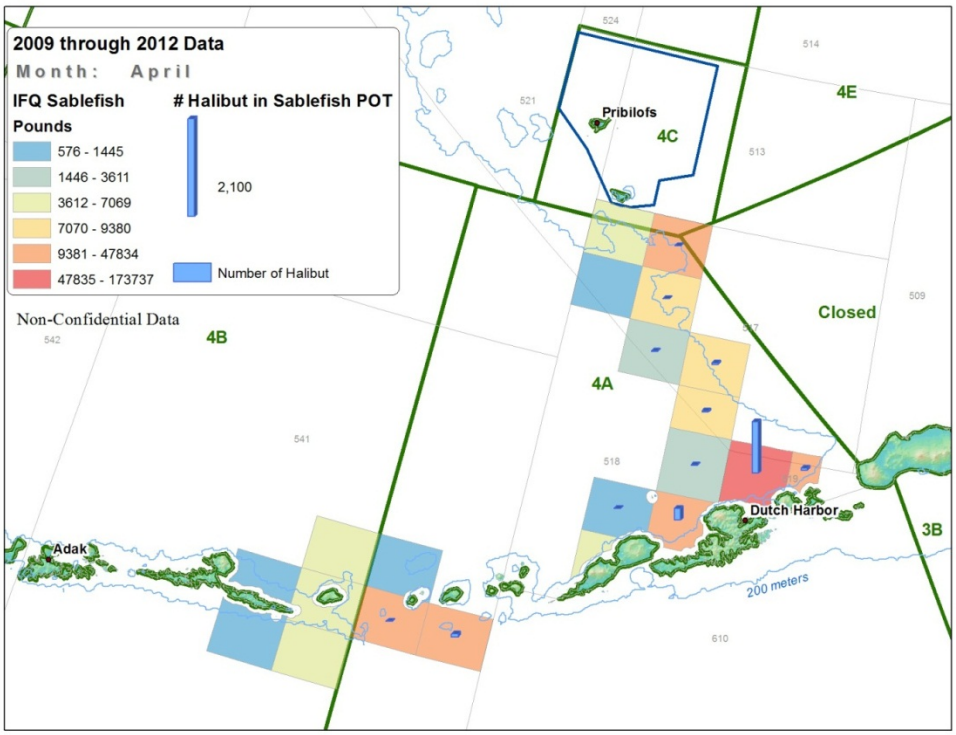

Figure 5 Number of total halibut (summed over 2009-2012) caught incidentally in IFQ sablefish fishery in pot gear by month.

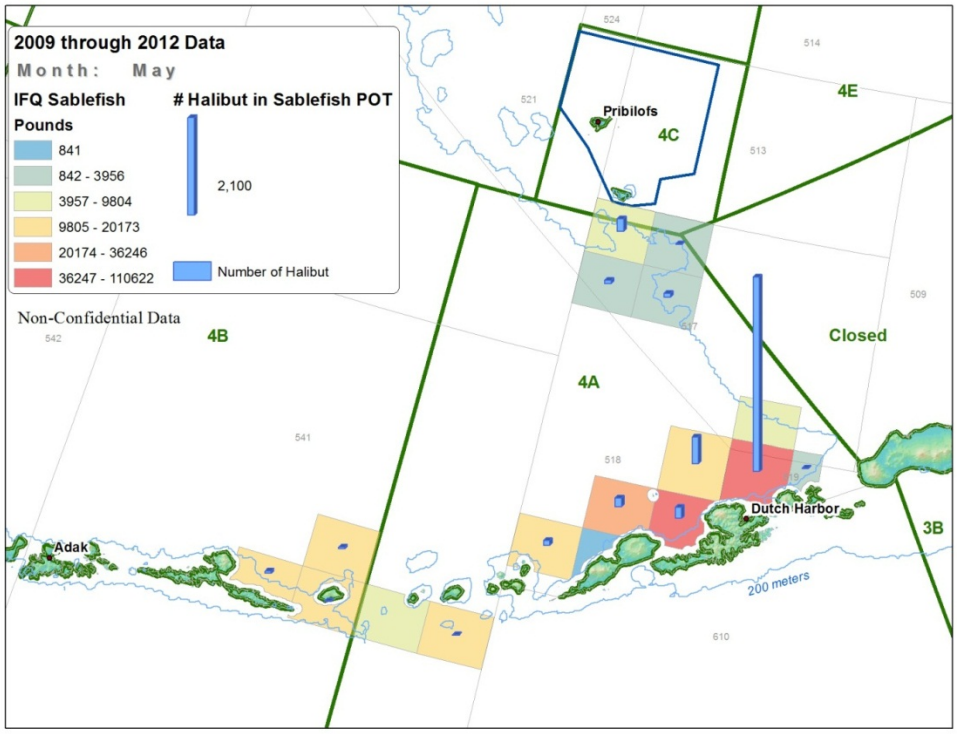

Figure 6 Number of total halibut (summed over 2009-2012) caught incidentally in IFQ sablefish fishery in pot gear by month.

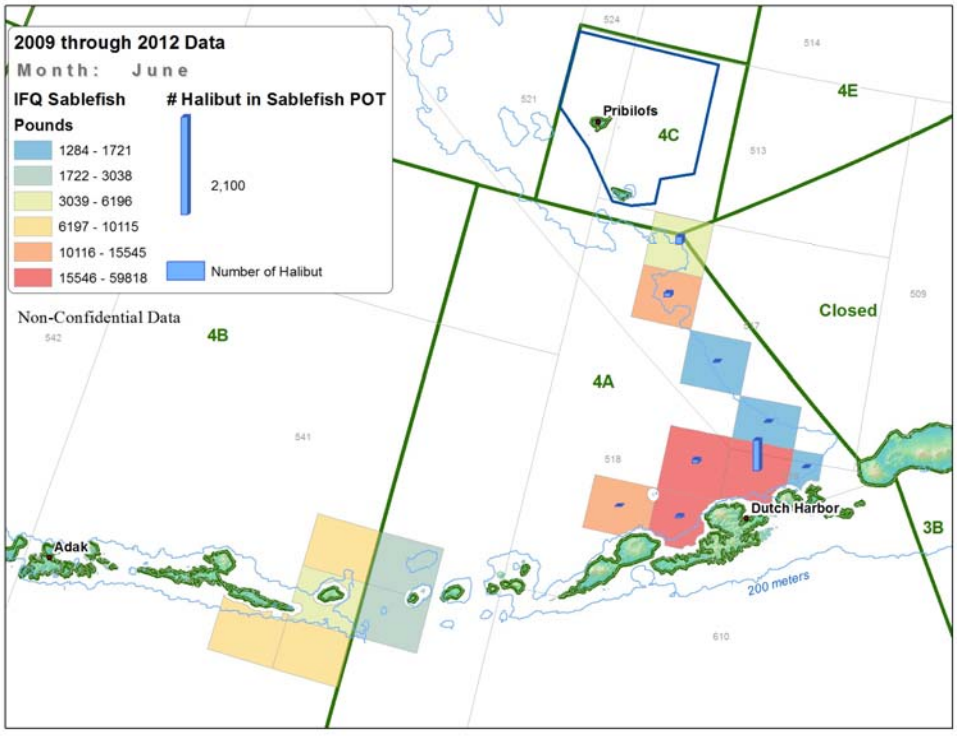

Figure 7 Number of total halibut (summed over 2009-2012) caught incidentally in IFQ sablefish fishery in pot gear by month.

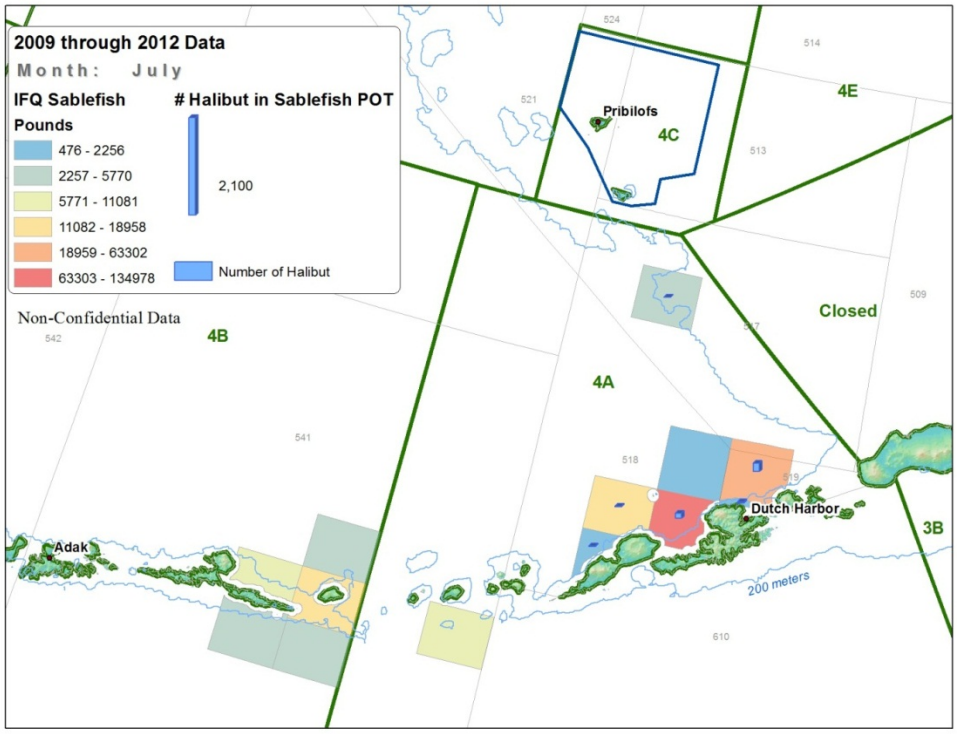

Figure 8 Number of total halibut (summed over 2009-2012) caught incidentally in IFQ sablefish fishery in pot gear by month.

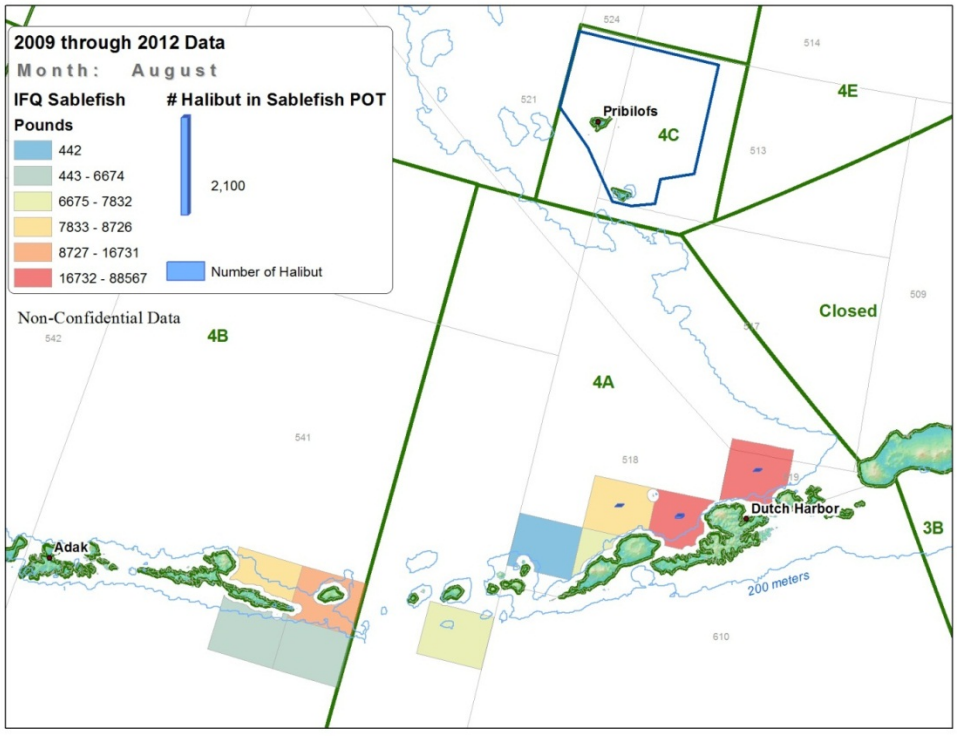

Figure 9 Number of total halibut (summed over 2009-2012) caught incidentally in IFQ sablefish fishery in pot gear by month.

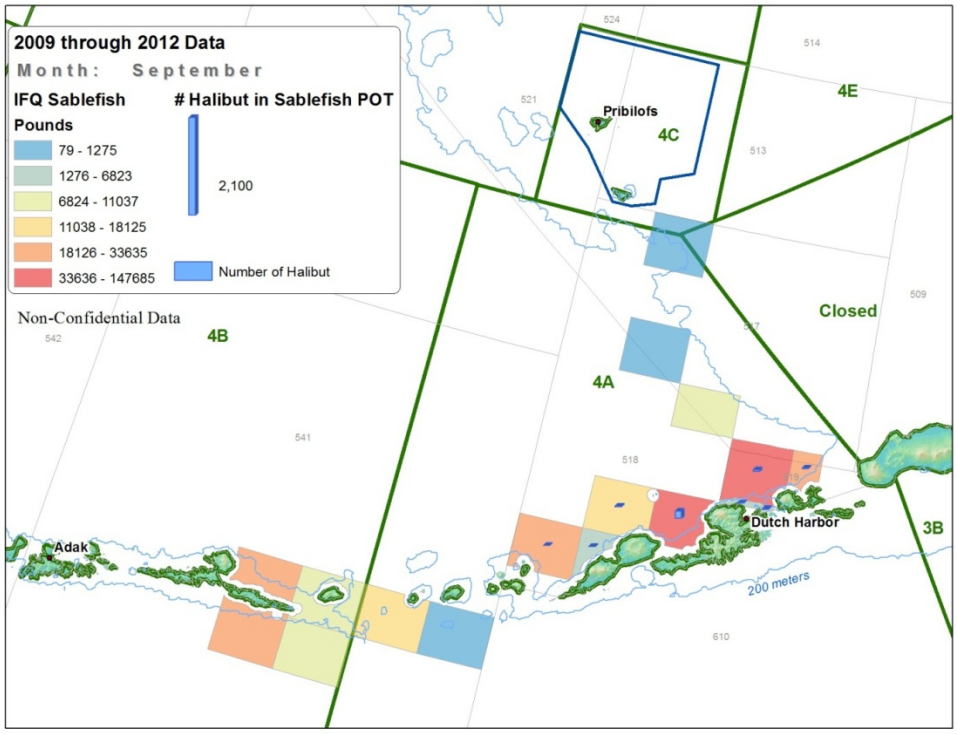

Figure 10 Number of total halibut (summed over 2009-2012) caught incidentally in IFQ sablefish fishery in pot gear by month.

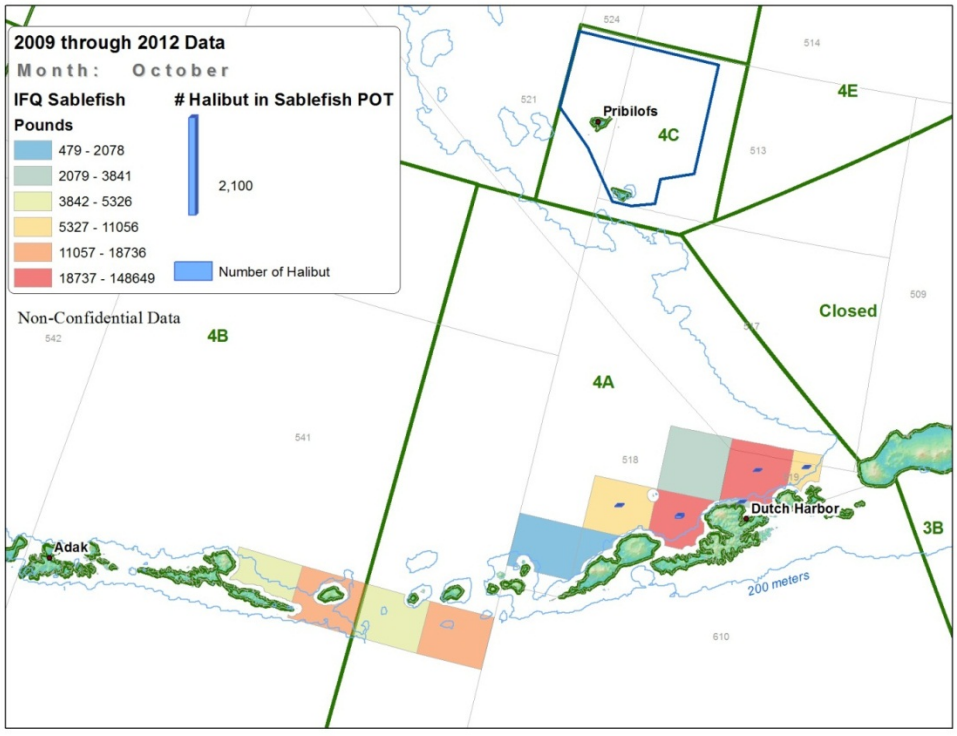

Figure 11 Number of total halibut (summed over 2009-2012) caught incidentally in IFQ sablefish fishery in pot gear by month.

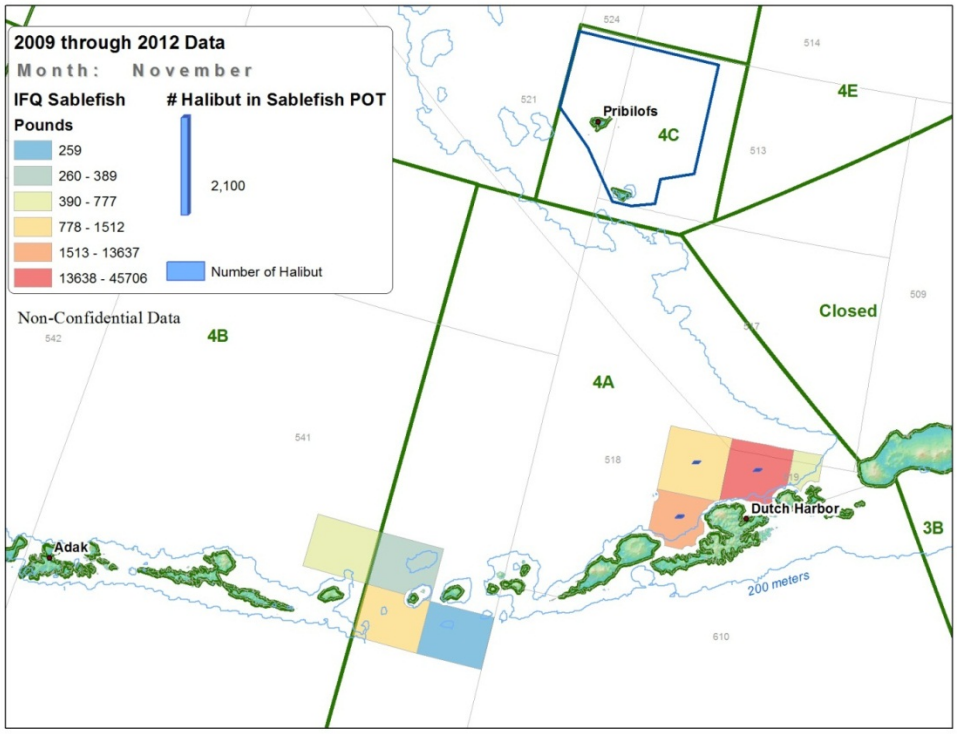

Figure 12 Number of total halibut (summed over 2009-2012) caught incidentally in IFQ sablefish fishery in pot gear by month.

Attachment 3 2009 IPHC letter to the Council

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September 24, 2009

Mr. Eric Olsen, Executive Director
North Pacific Fishery Management Council
605 W 4th Avenue, Suite 306
Anchorage, AK 99501-2252

Dear Mr. Olsen, Eric

The North Pacific Fishery Management Council's IFQ Implementation Team is reviewing IFQ proposals at the October Council meeting. The Council has been asked by the IPHC to comment on the proposal to allow retention of IFQ halibut in pot gear during the Bering Sea sablefish fishery. Authority for definition of legal gear for the halibut fishery rests with the Commission; however, the Council's input for the next IPHC Annual Meeting in January 2010 would be beneficial.

The IPHC staff is not opposed to allowing pot gear in Area 4A from a biological point of view. However, if the pot catch of halibut is sufficiently large enough, we would need to determine a pot gear selectivity curve for halibut for our stock assessment in order to account for that removal. Additionally, NMFS/RAM regulations would need to require full retention of halibut if the vessel has halibut IFQ and is using pot gear, similar to the regulation for longline gear. Also, IPHC regulations define legal gear by IPHC regulatory area but IPHC regulatory areas and NMFS sablefish areas are not concurrent. NOAA Enforcement would also need to provide feedback on location restrictions and may require that the vessel be transmitting with a Vessel Monitoring System transmitter.

The IPHC staff could not agree to allow pot gear coast-wide or an expansion to this proposal, without an understanding of the magnitude and impacts of catch in the pot fishery. The issues that the Council and Commission should consider include gear conflicts, creation of a new halibut fishery, redistribution of catch by gear, fish quality, and potential for future requests for expansion to winter cod fisheries.

Ms. Heather Gilroy of our staff will be attending the IFQ Implementation Team meeting by teleconference.

Sincerely,

Bruce

Bruce M. Leaman
Executive Director

cc: Commissioners
Jeff Stephan, Chair, IFQ Implementation Team
Ron Antaya, NMFS