Participation and Effort in the AI Groundfish Fisheries Discussion Paper

April 2016[1]

1 Introduction

In October 2015, the Council tasked staff to evaluate participation and effort in the offshore sector of the trawl groundfish fisheries in the Aleutian Islands (AI) for potential action to limit access to these fisheries. To dampen the effect of speculative entry into the offshore sector of the AI trawl groundfish fisheries in anticipation of potential future action, the Council announced a control date of December 31, 2015. The control date may be used as a reference date for a future management action to further limit access to this offshore fishery. The Council clarified that the control date would neither obligate the Council to use this control date in any future management action, nor obligate the Council to take any action or prevent the Council from selecting another control date. NMFS published an advance notice of proposed rulemaking announcing the control date in the *Federal Register* (81 FR 74744, November 30, 2015) https://alaskafisheries.noaa.gov/sites/default/files/80fr74744.pdf.

While deliberating on this issue, the Council also requested staff include a discussion on conservation and management issues associated with establishing a seasonal split for the AI Pacific cod total allowable catch (TAC). This Council request first originated in February 2015 when members of the hook-and-line catcher processor (CP) sector testified during the initial review of the AI Pacific cod shoreside processing stability action to add an option for a seasonal split for the fishery. Although the Council did not include the requested option in the analysis, the Council did tasked staff to prepare the discussion paper concerning the seasonal split issue. Since that discussion paper had not yet been presented to the Council and that discussion was germane to the discussion paper on participation and effort in AI groundfish fisheries, the Council combined the two issues into one discussion paper.

Addressing the Council request, this discussion paper provides a description of management and catch of the AI groundfish fisheries. Catch data used in this discussion paper was from 2003 through 2015. Data before 2003 was not included in the discussion paper to maintain consistent catch data calculations. Offshore catch data from 2003 through 2015 is from the Catch Accounting System which predominantly uses observer data, while catch data before 2003 is from Blend data that primarily selected production over observer data. For this reason, the discussion paper relies only on data from Catch Accounting System.

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2 Pacific cod

License Limitation Program

To participate in these Federal groundfish fisheries, groundfish License Limitation Program (LLP) licenses are required. Groundfish licenses contain endorsements that define what the vessel using the license is allowed to do. An area endorsement defines the geographic location the license allows a vessel to fish. Under the LLP, separate BS and AI area endorsements were earned and issued based on historic fishing patterns. Licenses may contain endorsements for both areas (BS and AI), or one of the two areas. Gear endorsements define what type of gear may be used: non-trawl, trawl, or both. Further, Pacific cod gear endorsements are required for non-trawl vessels ≥60' to participate in the BSAI fixed gear Pacific cod fishery: hook-and-line catcher processors, pot catcher processors, hook-and-line catcher vessels, and pot catcher vessels. Vessels fishing with jig gear in the BSAI are exempt from the LLP, provided they comply with size and gear limitations.[2]

Since the LLP program was first established, many trawl and fixed gear groundfish licenses have been inactive, thus incurring the term 'latent' licenses. In early 2007, the Council began reviewing the use of trawl-endorsed LLP licenses. The review was initiated primarily at the request of active trawl fishery participants who were concerned that latent trawl-endorsed LLP licenses could become active in the future and adversely affect their fishing operations. During the process of this review, the Council also received input from the public requesting modification to the LLP to meet unique conditions in the AI that limit the ability of catcher vessels to harvest, and specific AI communities to process, federally managed groundfish.

In April 2008, after more than a year of review and extensive public comment, the Council recommended modifications to the LLP to revise eligibility criteria for trawl endorsements on LLP licenses. The first modification removed certain latent trawl regulatory area endorsements on LLP licenses. With two exceptions, a trawl endorsement for a specific regulatory area is removed from an LLP license that has been assigned to a vessel that has not made a minimum of two landings using trawl gear in a specific regulatory area during 2000 through 2006. The first exemption is LLP licenses used on catcher vessels active in the GOA that made more than 20 landings in at least one of the regulatory areas of the GOA from 2005 through 2007. The second exemption applies to any LLP license that is assigned for use in the American Fisheries Act, Central GOA Rockfish Program, or the Amendment 80 Program. This exemption benefits the participants in the three catch share programs that have already met stricter requirements for the specific catch share program.

The second modification to the LLP Program was the adding of 12 AI endorsements to non-AFA trawl catcher vessel LLP licenses to provide additional harvest opportunities to these vessels that have been active in State waters in the AI, but which are not designated on an LLP license with an AI area endorsement.

Table 1 shows the number of groundfish LLPs with an AI endorsement by Pacific cod sectors as of February 2016. In total there are 25 AI only LLP licenses and 170 BSAI LLP licenses.

[2] Vessels that do not exceed 60 feet LOA and that are using jig gear (but no more than 5 jig machines, one line per machine, and 15 hooks per line) are exempt from the LLP requirements in the BSAI.

Table 1 Number of BS, AI, and BSAI LLPs in the BSAI Pacific cod sectors

Sector	Permit required and/or eligibility criteria per statue	BS only LLP	AI only LLP	BSAI LLP	Total # of valid LLPs
AFA Trawl CP	AFA CP permit/listed in 208(e)(1)-(20); trawl LLP (CP/BSAI)	2	0	25	27
Non-AFA Trawl CP	CP; must have harvested with trawl gear and processed no less than 150 mt of non-pollock groundfish during 1997 through 2002.	7	1	30	38
AFA Trawl CV	AFA CV permit; trawl LLP (CV/BSAI)[2]	57	0	42	99
Non-AFA Trawl CV	trawl LLP (CV/BSAI)	11	8	5	24
Non-AFA Trawl CV >60'	trawl LLP (CV > 60' in the AI)	0	4	0	4
Non-AFA Trawl CV <60'	trawl LLP (CV < 60' in the AI)	0	8	0	8
Hook-and-line CP	non-trawl LLP (BSAI/H&L CP cod endorsement)	2	0	34	36
Hook-and-line CV >60'	non-trawl LLP (BSAI/H&L CV cod endorsement	1	1	6	8
Pot CP	non-trawl LLP (BSAI/pot CP cod endorsement	3	0	5	8
Pot CV >60'	non-trawl LLP (BSAI/pot CV cod endorsement	47	1	2	50
Hook-and-line/Pot <60'	non-trawl LLP (CV/BSAI)	87	2	21	110
Jig CV	LLP is not required for <60' jig CV in the BSAI	N/A	N/A	N/A	N/A
Total Endorsements		**217**	**25**	**170**	**412**

Source: RAM March 1, 2016

Management

Since 2014, the BSAI Pacific cod ABC and TAC has been managed as separate stocks throughout the BSAI management area.[3] Table 2 provides ABCs, TACs, and ITACs of BSAI Pacific cod from 2003 through 2013, and ABCs, TACs, and ITACs for BS Pacific cod and AI Pacific cod for 2014 and 2015. Note that the ICA for incidental catch of AI Pacific cod in other groundfish fisheries comes off the ITAC such that the ITAC is not entirely available for the directed AI Pacific cod fishery.

Table 2 BSAI Pacific cod ABC, TAC, and ITAC 2003 to 2013 and BS and AI Pacific cod ABC, TAC, and ITAC 2014 and 2015 (amounts in metric tons)

Year	BSAI			BS			AI		
	ABC	TAC	ITAC	ABC	TAC	ITAC	ABC	TAC	ITAC
2003	223,000	207,500	191,938	N/A					
2004	223,000	215,500	199,338						
2005	206,000	206,000	190,550						
2006	194,000	194,000	174,067						
2007	176,000	170,720	157,916						
2008	176,000	170,720	152,453						
2009	182,000	176,540	157,650						
2010	174,000	168,780	150,721						
2011	235,000	227,950	203,559						
2012	314,000	261,000	233,073						
2013	307,000	260,000	232,180						
2014	N/A			255,000	246,897	220,479	15,100	6,997	6,248
2015				255,000	240,000	214,320	17,600	9,422	8,414

Source: NMFS Final Specifications

While separate OFLs, ABCs, and TACs, have been created for the AI and for the BS, the actual sector allocations (except CDQ allocations) remain BSAI-wide allocations. Sector allocations are calculated as a percent of the summed AI and BS TACs, after adjustments are made to account for CDQ allocations (which receive 10.7 percent). The ITAC is allocated among nine non-CDQ sectors. The percentages for

[3] The regulations governing the Pacific cod TAC may be found in 50 CFR 679.20(a)(7)(i) and (ii) and described in the final 2015 and 2016 harvest specifications for groundfish of the BSAI (80 FR 11919 March 5, 2015).

the allocation of the TAC among the nine non-CDQ sectors, shown in descending order, by size of allocation, are:

- Hook-and-line CPs – 48.7 percent
- Trawl CVs – 22.1 percent
- Amendment 80 trawl CPs – 13.4 percent
- Pot CVs greater than or equal to 60 feet LOA – 8.4 percent
- AFA trawl CPs – 2.3 percent
- Hook-and-line and pot CVs less than 60 feet LOA – 2 percent
- Pot CPs – 1.5 percent
- Jig vessels – 1.4 percent
- Hook-and-line CVs greater than or equal 60 feet LOA - 0.2 percent

Each of the non-CDQ sectors that receives an allocation, may fish their allocation within the AI or the BS, subject only to its overall harvest limit, and any seasonal, or other restrictions on harvests. This approach is consistent with the Council's intent concerning sector allocations. The Council recognized the dynamic nature of the AI Pacific cod fishery and the difficulty in predicting the likely outcomes of a TAC split, given that (1) all gear sectors have varied the proportion of total Pacific cod harvest in the AI over time; (2) Steller sea lion protection measures reduce a large portion of the fishable area in the AI; and (3) it is unknown how sectors will change their fishing patterns and redeploy in response to any changes in the Steller sea lion protection measures.

In addition, the State of Alaska has managed a guideline harvest level (GHL) fishery for Pacific cod in State waters in the AI subarea since 2006. From 2006 through the 2015 fishing season, the AI GHL was 3 percent of the Federal BSAI Pacific cod ABC. In December 2015, the Alaska Board of Fisheries changed the AI GHL calculations to better align with the split of the Federal BSAI Pacific cod stock into separate BS and AI stocks. Starting in 2016, the AI GHL will be 27 percent of the AI ABC, with annual step up provisions if the AI GHL is fully harvested to a maximum of 39 percent of the AI ABC. In addition, the Alaska Board of Fisheries capped that AI GHL at maximum of 15 million pounds. If 27 percent of the AI ABC is greater than 15 million pounds in some future year, the AI GHL for that year is 15 million pounds. Utilizing the new AI GHL calculations, the AI GHL for 2015 would have been 4,752 mt, which represents a significant decline in the AI GHL (8,103 mt) for that year using the previous GHL calculations.

Because there are no sector allocations specific to each area, there are no gear specific seasonal allowances by area. While the overall guideline for the BSAI Pacific cod fishery continues to be a 70:30 percent seasonal split, the seasonal allowances vary by gear type taking into account changes to the season dates from the 2014 Steller sea lion protection measures (Table 3).

Table 3 BSAI Pacific cod seasonal allowances

Pot	Jan 1 – June 10 (51%), Sept 1 – Dec 31 (49%) Pot CVs <60' do not have seasonal allowances.	Trawl CV	Jan 20 – April 1 (74%), April 1 – June 10 (11%); June 10 – Nov 1 (15%)
Hook and Line	Jan 1 – June 10 (51%), June 10 – Dec 31(49%) Hook-and-line CVs <60' do not have seasonal allowances.	Trawl CP	Jan 20 – April 1 (75%), April 1 – June 10 (25%); June 10 – Nov 1 (0%)
Jig	Jan 1 – Apr 30 (60%) Apr 30 – Aug 31 (20%) Aug 31 – Dec 31 (20%)	Trawl CP	Jan 20 – April 1 (75%), April 1 – June 10 (25%); June 10 – Nov 1 (0%)

Table 4 provides the BSAI Pacific cod sector apportionment and BSAI Pacific cod seasonal allowance for the 2015 fishing year.

Table 4 BSAI Pacific cod sector apportionment and BSAI Pacific cod seasonal allowance for 2015

Sector (allocation)	BSAI Sector Apportionment (mt)	BSAI Season allowance (mt)	
		A	B
H&L/pot < 60' (2%)	4,455	No seasonal allowance	
H&L CV≥ 60' (0.2%)	445	227	218
H&L CP (48.7%)	108,471	55,320	53,151
Pot CV ≥ 60' (8.4%)	18,710	9,542	9,168
Pot CP (1.5%)	3,341	1,704	1,637

Sector	BSAI Sector Apportionment (mt)	BSAI Season allowance (mt)		
		A	B	C
Jig vessels (1.4%)	3,118	1,871	624	624
AFA trawl CP (2.3%)	5,123	3,842	961	0
Amendment 80 (13.4%)	29,846	22,385	5,596	0
Trawl CV (22.1%)	49,224	36,426	5,415	7,384

Source: NMFS Final Specifications

During that February 2015 Council meeting, members of the hook-and-line CP sector testified during the initial review of the AI Pacific cod shoreside processing stability action (Amendment 113) to add an option for an A/B seasonal AI Pacific cod split due to the steadily declining harvest opportunity in the AI Pacific cod fishery for their sector. Although the Council did not include the requested option in the analysis, the Council did task staff to prepare a discussion paper on the conservation and management issues associated with establishing a seasonal split for the AI Pacific cod TAC.

In reviewing the conservation issues associated with a seasonal apportionment of AI Pacific cod, there does not appear to be any need for a seasonal apportionment. For AI Pacific cod, Steller sea lion protections are the primary reason for seasonal apportionment to provide a temporal dispersion of fishing effort. Since there are already Steller sea lion protection measures in place that provide temporal dispersion of fishing effort by gear/sector in the BSAI, providing additional temporal dispersion of fishing effort through a seasonal apportionment of AI Pacific cod TAC would likely not provide additional temporary dispersion sufficient enough to contribute any measurable benefit for protection of Steller sea lions.

Another potential benefit of a Pacific cod seasonal split could be reductions in halibut PSC, since halibut PSC rates can vary during the fishing season. However, since the AI Pacific cod fishery has significantly

less halibut PSC relatively to the BS Pacific cod fishery, there would likely be little halibut PSC saving from a seasonal split in the AI. There is even a potential for increased halibut PSC as sectors that would normally fish Pacific cod in the AI are forced to harvest their Pacific cod allocation in the BS under an A/B split. As noted in Table 8-62 of the Final EIS for Steller Sea Lion Protection Measures, the estimated average PSC rates per ton of groundfish by trawl CVs is 0.0013 in the AI and 0.014 in the BS, 2004 through 2012.

There is some potential that a seasonal apportionment could increase the difficulty in the managing the fishery. The current TAC for AI Pacific cod is low thus resulting in a short open directed fishery in 2014, which closed February 27. A seasonal split for AI Pacific cod under current TAC conditions would likely shorten the season even further thus increasing the difficulty of managing the fishery. In the future, if AI Pacific cod TAC declines further, an AI seasonal split could exacerbate the ability to open an A season directed fishery, and in some cases even jeopardize the directed fishery since there may be insufficient directed fishing allowance for the A season. Any amount unused in the A season would roll to the B season.

A separate seasonal split for AI Pacific cod may diminish the effectiveness of the Council's most recent action to provide some stability to AI shoreplant operations and communities dependent on shoreside processing activity. In October 2015, the Council took final action on Amendment 113, which would prioritize 5,000 mt of AI Pacific cod for access by CVs and designate its delivery to shoreplants in the AI until March 15. Depending on the seasonal apportionment, during periods of low AI TACs, a seasonal split will reduce the amount of AI Pacific cod that could be delivered and processed at the AI shoreplants. The A season Pacific cod fishery is a main source of income for the AI Adak shoreplant, currently the only shoreplant west of 170° longitude that has processed any significant amount of AI Pacific cod. The timing of the AI Pacific cod fishery tends (see Figure 1) to match shoreplant processing. The Adak processing plant was most active from January through March, followed by virtually no processing from April through June, and then running less than half-speed from July through September before activity ends in October or November. On the other hand, if a seasonal apportionment were limited to AI Pacific cod ITACs greater than 10,000 mt, the impacts to the Council's AI shoreplant stability action would likely be limited.

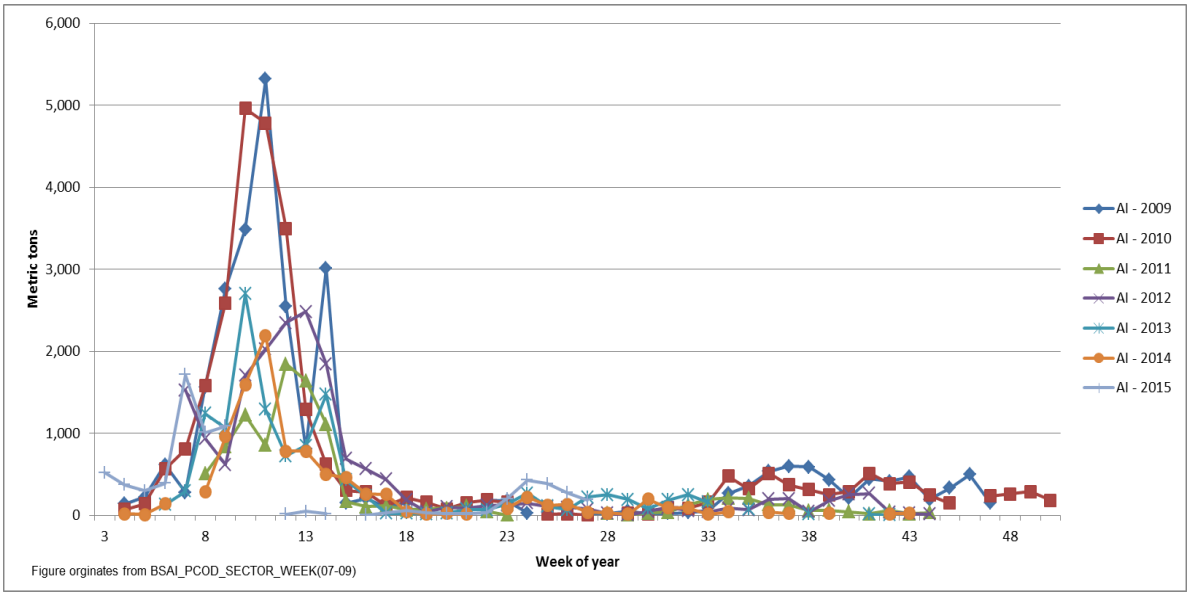

Figure 1 **Total retained harvest by all sectors of AI Pacific cod by week, 2010 through June 2015**

Catch and Effort

Table 5 shows catch and vessel count of Pacific cod in the AI target fishery, by sector, from 2003 through 2015, excluding CDQ catch and State GHL catch. Some of these data are not provided due to confidentiality; other data are masked to protect confidential data that would otherwise be evident due to simple subtraction.

Of the sectors that participated in the target AI Pacific cod fishery, the trawl CV and trawl CP sectors had the largest catch amounts. The trawl CV sector, on average, harvested the largest share of the targeted AI Pacific cod every year since 2003 at 61 percent. The trawl CP sector harvested, on average, 22 percent of the targeted AI Pacific cod every year since 2003. The hook-and-line CP sector has also consistently participated in the targeted AI Pacific cod on an annual basis since 2003 at 16 percent. In 2014, no hook-and-line CP targeted AI Pacific cod prior to the fishery closing on March 16, while in 2015, three hook-and-line CPs targeted AI Pacific cod starting the first week in January.

Table 5 AI catch of Pacific cod in the Pacific cod target fishery and vessel count, by sector, 2003 through 2015

Year	Sectors	AI		
		Vessels	Metric tons	%of total
2003	HAL CP	7	836	3
	HAL CV	4	*	*
	JIG	1	*	*
	POT CP	0	0	0
	POT CV	0	0	0
	TRW CP	9	11,924	40
	TRW CV	32	17,201	57
Total		53	29,961	
2004	HAL CP	6	*	*
	HAL CV	2	*	*
	JIG	0	0	0
	POT CP	0	0	0
	POT CV	0	0	0
	TRW CP	10	9,905	38
	TRW CV	21	13,439	51
Total		39	26,295	
2005	HAL CP	4	2,114	11
	HAL CV	2	*	*
	JIG	1	*	*
	POT CP	0	0	0
	POT CV	0	0	0
	TRW CP	9	9,303	48
	TRW CV	16	7,973	41
Total		30	19,410	
2006	HAL CP	8	2,183	12
	HAL CV	2	*	*
	JIG	1	*	*
	POT CP	1	*	*
	POT CV	3	305	2
	TRW CP	9	8,417	47
	TRW CV	16	6,907	39
Total		40	17,904	

Source: AKFIN
Table orginates from pivot file BSAI_PCOD_SECTOR(03-02)
* Denotes confidentiality
HAL = hook-and-and line; TRW= trawl

Table 5 AI catch of Pacific cod in the Pacific cod target fishery and vessel count, by sector, 2003 through 2015

Year	Sectors	AI		
		Vessels	Metric tons	% of total
2007	HAL CP	5	2,233	9
	HAL CV	6	31	0
	JIG	1	*	*
	POT CP	1	*	*
	POT CV	2	*	*
	TRW CP	10	10,389	40
	TRW CV	33	13,122	50
Total		58	26,069	
2008	HAL CP	9	4,046	17
	HAL CV	5	139	1
	JIG	9	*	*
	POT CP	4	1,895	8
	POT CV	1	*	*
	TRW CP	6	3,768	16
	TRW CV	31	13,933	58
Total		65	24,020	
2009	HAL CP	7	4,724	20
	HAL CV	1	*	*
	JIG	0	0	0
	POT CP	3	*	*
	POT CV	0	0	0
	TRW CP	5	3,256	14
	TRW CV	26	14,880	63
Total		42	23,630	
2010	HAL CP	10	4,574	23
	HAL CV	1	*	*
	JIG	0	0	0
	POT CP	2	*	*
	POT CV	0	0	0
	TRW CP	5	2,390	12
	TRW CV	24	12,611	62
Total		42	20,240	
2011	HAL CP	5	1,135	13
	HAL CV	1	*	*
	JIG	0	0	0
	POT CP	1	*	*
	POT CV	0	0	0
	TRW CP	1	129	1
	TRW CV	14	7,493	85
Total		22	8,783	
2012	HAL CP	5	*	*
	HAL CV	0	0	0
	JIG	0	0	0
	POT CP	0	0	0
	POT CV	0	0	0
	TRW CP	1	*	*
	TRW CV	15	6,080	59
Total		21	10,313	
2013	HAL CP	3	*	*
	HAL CV	0	6	0
	JIG	0	0	0
	POT CP	0	0	0
	POT CV	0	0	0
	TRW CP	2	*	*
	TRW CV	7	5,062	81
Total		12	6,260	
2014	HAL CP	0	0	0
	HAL CV	0	0	0
	POT CP	0	0	0
	POT CV	0	0	0
	TRW CP	1	*	*
	TRW CV	6	*	*
Total		7	4,421	
2015	HAL CP	3	*	*
	HAL CV	0	0	0
	POT CP	0	0	0
	POT CV	0	0	0
	TRW CP	2	*	*
	TRW CV	4	2,579	47
Total		9	5,479	

Source: AKFIN
Table orginates from pivot file BSAI_PCOD_SECTOR(03-02)
* Denotes confidentiality
HAL = hook-and-and line; TRW= trawl

Historically, a portion of the BSAI Pacific cod ITAC allocated to CVs has been harvested in the AI and processed shoreside. A portion of this AI harvest has also typically been processed offshore, by motherships, floating processors, CPs, or CPs acting as motherships. Included in Table 6 are annual metric tons of AI Pacific cod processed offshore and at shoreplants from 2003 through 2015. Looking at the offshore sector first, the proportion of AI Pacific cod processed has ranged from a low of 44 percent in 2013 and 2014, to a high of 100 percent in 2011 and 2015. Also included in the table for the offshore sector is the percent of AI Pacific cod processing that can be attributed to AI Pacific cod harvested by CPs themselves and deliveries of AI Pacific cod by CVs to the CPs. This information indicates that prior to 2008, the majority of the AI Pacific cod processed by the offshore sector originated from CP harvest, but after 2008 with the change in Pacific cod sector allocation implemented by Amendment 85, CV deliveries of AI Pacific cod to CPs played a more prominent role in the offshore processing of AI Pacific cod. As for the portion of AI Pacific cod processed by shoreplants processing, that has ranged from a low of 0 percent in 2015, to a high of 56 percent in 2013 and 2014.

Among the trawl CVs active in the AI Pacific cod fishery, some CVs also deliver AI Pacific cod to CPs and motherships. As noted in Table 7**,** the number of CVs delivering AI Pacific cod to CPs and floaters has ranged from a low of eight in 2014 and 2015, to a high of 23 in 2010. The amount of AI Pacific cod delivered to CPs and floaters ranged from a low of 1,521 mt in 2005, to a high of 12,443 mt in 2010. Likely the 2010 peak in offshore deliveries can be attributed to the closing of the Adak shoreplant during 2010 fishing year. On average, during the last 13 years, 53 percent of the total CV deliveries of AI Pacific cod were to the offshore sector and 47 percent were to the shoreplants.

Table 6 Amount of AI Pacific cod processed offshore and, at shoreplants 2003 through 2015

	At-sea processing				Shorebased processing		Total target
Year	Target (mt)	% of total AI	% from CP harvest	% from CV delivered	Target (mt)	% of AI	Target (mt)
2003	20,969	70	61	39	9,040	30	29,966
2004	16,981	65	76	24	9,357	36	26,295
2005	12,938	67	88	12	6,486	33	19,410
2006	13,038	73	82	18	4,883	27	17,904
2007	15,930	61	80	20	10,164	39	26,071
2008	19,314	80	50	50	4,770	20	24,020
2009	15,380	65	56	44	8,278	35	23,630
2010	19,956	99	38	62	298	1	20,240
2011	8,764	100	12	88	51	1	8,783
2012	7,130	69	57	43	3,209	31	10,313
2013	2,715	44	42	58	3,516	56	6,225
2014	1,944	44	8	92	2,480	56	4,421
2015	5,479	100	51	49	0	0	5,479

Source: AKFIN

Table orginates from pivot table BSAI_PCOD_PROC_CNT(06-30), BSAI_PCOD_PROC_INCvTGT(07-06), & CV_BSAI_PROC_SECTOR(07-07)

Table 7 Number of CVs, metric tons, and percent of AI Pacific cod (target and incidental) delivered to CPs acting as mothership and floaters and the number of CVs, metric tons, and percent of AI Pacific cod delivered to shoreplants, 2003 through 2015

Year	CVs delivering AI Pacific cod to CPs and floaters				CVs delivering to shoreplants				Total CV deliveries (mt)
	# CVs	# of CPs and floaters	Metric tons	% of total CV deliveries	# of CVs	# of shoreplants	Metric tons	% of total CV deliveries	
2003	18	3	8,209	48	50	9	9,040	52	17,249
2004	12	4	4,153	31	36	6	9,357	69	13,511
2005	9	3	1,521	19	30	5	6,486	81	8,007
2006	11	4	2,355	33	38	6	4,883	67	7,239
2007	13	5	3,206	24	44	5	10,164	76	13,370
2008	21	6	9,621	67	58	8	4,769	33	14,390
2009	13	5	6,732	45	34	5	8,278	55	15,010
2010	23	5	12,443	98	23	7	298	2	12,741
2011	14	4	7,726	99	16	6	51	1	7,777
2012	13	4	3,056	49	28	6	3,209	51	6,265
2013	9	3	1,587	31	17	5	3,516	69	5,103
2014	8	4	1,793	42	8	4	2,480	58	4,273
2015	8	6	2,696	100	0	0	0	0	2,696

Source: AKFIN

Table orginates from pivot file CV_BSAI_PCOD_SECTOR(07-07)

Table 8 shows the number of years that each trawl CP vessel processed targeted AI Pacific cod as a CP or as a mothership from 2000 through 2015. Of the 16 trawl CPs that processed targeted AI Pacific cod during 2000 through 2015, only four CPs processed Pacific cod in at least 12 years. Factoring in mothership activity, only one vessel processed targeted AI Pacific cod 14 of the past 16 years.

Table 8 Number of years each trawl CP processed targeted AI Pacific cod from 2000 through 2015

Vessel	CP	Mothership
VES1	13	7
VES2	12	0
VES3	12	0
VES4	12	14
VES5	9	1
VES6	8	3
VES7	7	0
VES8	6	0
VES9	3	0
VES10	3	0
VES11	2	0
VES12	2	0
VES13	1	0
VES14	1	0
VES15	1	2
VES16	0	3

Source: AKFIN

Table orginates from privot file AI_PROC(3-30)

Table 9 shows the number of years each fixed gear (longline and pot) CP processed targeted AI Pacific cod fishery as a CP or as a mothership from 2000 through 2015. Of the 45 fixed gear CPs that have

processed targeted AI Pacific cod during 2000 through 2015, only three CPs processed targeted AI Pacific cod at least 9 years during the 16 year period. Five fixed gear CPs also acted as a mothership processing targeted AI Pacific cod during the 15 year period at least once, and one of those vessels acted as mothership processing targeted AI Pacific cod two years.

Table 9 Number of years each fixed gear CP processed AI Pacific cod from 2000 through 2015

Vessel	CP	Mothership
VES1	9	0
VES2	9	0
VES3	9	0
VES4	8	0
VES5	7	0
VES6	6	0
VES7	5	0
VES8	4	0
VES9	4	0
VES10	4	0
VES11	4	0
VES12	4	0
VES13	4	0
VES14	4	0
VES15	4	0
VES16	3	0
VES17	3	0
VES18	3	0
VES19	3	0
VES20	3	1
VES21	3	0
VES22	3	0
VES23	2	0
VES24	2	0
VES25	2	2
VES26	2	0
VES27	2	0
VES28	1	0
VES29	1	0
VES30	1	0
VES31	1	0
VES32	1	0
VES33	1	0
VES34	1	0
VES35	1	0
VES36	1	0
VES37	1	0
VES38	1	0
VES39	1	0
VES40	1	0
VES41	1	0
VES42	1	1
VES43	1	0
VES44	0	1
VES45	0	1

Source: AKFIN, March 30, 2015

Table orginates from privot file AI_PROC(3-30)

Table 10 shows the number of years the first 40 trawl/fixed gear CVs that targeted AI Pacific cod from 2000 through 2015. Overall, there were 167 trawl/fixed gear CVs that targeted AI Pacific cod at least one year during 2000 through 2015. Twelve CVs targeted AI Pacific cod at least 10 years during that period. Two of these CVs targeted AI Pacific cod 14 of the past 16 years, while five CVs harvested AI Pacific cod 13 of the past 16 years.

Table 10 Number of years the first 40 trawl/fixed gear vessels that targeted AI Pacific cod from 2000 through 2015

Vessel	Targeted
VES1	14
VES2	14
VES3	13
VES4	13
VES5	13
VES6	12
VES7	11
VES8	11
VES9	10
VES10	10
VES11	10
VES12	10
VES13	9
VES14	8
VES15	8
VES16	8
VES17	7
VES18	7
VES19	7
VES20	5
VES21	5
VES22	5
VES23	5
VES24	5
VES25	5
VES26	5
VES27	4
VES28	4
VES29	4
VES30	4
VES31	4
VES32	4
VES33	4
VES34	4
VES35	4
VES36	3
VES37	3
VES38	3
VES39	3
VES40	3

Source: AKFIN

Table orginates from privot file AI_PROC(3-30)

Table 11 shows the halibut PSC limit for the BSAI TLA Pacific cod fishery and halibut mortality for the AI TLA Pacific cod fishery. The AI TLA halibut mortality has ranged from a low of 21 mt in 2013 to a high of 89 mt in 2009. Of the TLA halibut PSC limit annually assigned to the BSAI TLA Pacific cod

fishery from 2008 through 2015, 12 percent was utilized in the AI TLA Pacific cod fishery on annual basis.

Table 11 Halibut PSC limit for BSAI TLA Pacific cod fishery and halibut mortality for AI TLA Pacific cod fishery

Year	TLA Halibut PSC limit (mt)	Halibut mortality (mt)
2008	585	87
2009	508	89
2010	275	72
2011	453	32
2012	453	50
2013	453	21
2014	393	23
2015	453	25

Source file: PSC_TGT_AI(3-8)

Summary

The following are summary observations from the review of the AI Pacific cod fishery:

- A split of AI Pacific cod stock and BS Pacific cod stock was implemented in 2014.
- Sector allocations, except CDQ, remain BSAI-wide allocations.
- From a conservation and a management perspective, a seasonal apportionment of AI Pacific cod is likely not necessary.
- A seasonal split for AI Pacific cod would likely diminish the effectiveness of the Council's Oct 2015 action to provide stability to AI shoreplant operations and communities dependent on that shoreside processing activity.
- Of the sectors that participated in the target AI Pacific cod fishery, the trawl CV and CP sectors had the largest catch amounts.
- Historically, AI Pacific cod allocated to CVs has been processed onshore and processed offshore, by motherships, floating processors, or CPs acting as motherships.
- Of the 16 trawl CPs that processed targeted AI Pacific cod during the 2000 through 2015 period, only 4 processed targeted AI Pacific cod for at least 12 years.
- Of the 45 fixed gear CPs that processed targeted AI Pacific cod during the 2000 through 2015 period, only three processed AI Pacific cod for at least 9 years.
- Overall, 167 trawl or fixed gear CVs targeted AI Pacific cod at least one year during 2000 through 2015. Of those vessels, only 12 CVs targeted AI Pacific cod at least 10 years during that period.

3 Atka mackerel

Management

Atka mackerel TAC is allocated to the Amendment 80 and BSAI trawl limited access (TLA) sectors, after subtracting the CDQ reserves, jig gear allocation, and the ICAs for the BSAI TLA sectors and non-trawl gear sector. The Council phased in the allocation percentages over a four year period, starting in 2008. The allocation percentages started at 98 percent for the Amendment 80 sector in the EAI/BS and CAI and then were reduced 2 percent every year for four years, culminating at 90 percent in 2012. For WAI, 100 percent is allocated to the Amendment 80 sector. Up to two percent of the EAI and the BS subarea Atka mackerel ITAC may be allocated to vessels using jig gear. The percent of this allocation is recommended

annually by the Council based on several criteria, including the anticipated harvest capacity of the jig gear fleet. The Council recommended and NMFS approved a 0.5 percent allocation of the Atka mackerel ITAC in the EAI and BS subarea to the jig gear sector in 2015 and 2016. This percentage is applied to the Atka mackerel TAC after subtracting the CDQ reserve and the ICA.

Atka mackerel TAC is apportioned into two equal seasonal allowances. The first seasonal allowance for directed fishing with trawl gear is from January 20 through June 10 (A season), and the second seasonal allowance from June 10 through December 31 (B season, prior to 2015 the B season ended November 1). The ICA and jig gear allocations are not apportioned by season.

Steller sea lion protection measures implemented in 2015 limits Atka mackerel catch in critical habitat west of 178° W longitude to no more than 60 percent of the annual TACs in the CAI and WAI. In addition, critical habitat limit is divided equally between the A and B seasons. The WAI TAC is limited to 65 percent of the ABC.

Table 12 provides historical acceptable biological catch (ABC), TAC, ITAC, and the Amendment 80 and BSAI TLA allocations for BSAI Atka mackerel from 2003 through 2015. Table 13 provides the 2015 seasonal and spatial allowances, gear shares, CDQ reserve, ICA, and Amendment 80 and TLA allocations of BSAI Atka mackerel TAC.

Table 12 BSAI Atka mackerel ABC, TAC, ITAC, AM80 and BSAI TLA allocations, 2003-2015 (all amounts are in metric tons)

Year	ABC	TAC	ITAC	AM80	TLA
2003	63,000	60,000	51,000		
2004	66,700	63,000	53,550		
2005	124,000	63,000	53,550	N/A	
2006	110,000	63,000	53,550		
2007	74,000	63,000	53,550		
2008	60,700	60,700	54,205	51,953	753
2009	83,800	76,400	68,225	65,754	2,114
2010	74,000	74,000	66,082	62,930	2,845
2011	85,300	53,080	47,400	43,373	3,659
2012	81,400	50,763	45,331	39,752	4,272
2013	50,000	25,920	23,147	19,895	2,066
2014	64,131	32,322	28,863	24,976	2,680
2015	106,000	54,500	48,669	44,327	3,812

Source: NMFS Final Specifications

TLA = trawl limited access

*ITAC = TAC-CDQ

Table 13 Final 2015 Seasonal and spatial allowances, gear shares, CDQ reserve, incidental catch allowance, and Amendment 80 and BSAI TLA allocations of the BSAI Atka mackerel TAC (all amounts are in metric tons)

Sector[1]	Season[2,3,4]	2015 allocation by area		
		Eastern Aleutian District/Bering Sea	Central Aleutian District[5]	Western Aleutian District
TAC	n/a	27,000	17,000	10,500
CDQ reserve	Total	2,889	1,819	1,124
	A	1,445	910	562
	Critical Habitat	n/a	546	337
	B	1,445	910	562
	Critical Habitat	n/a	546	337
ICA	Total	1,000	75	40
Jig[6]	Total	116	0	0
BSAI trawl limited access	Total	2,300	1,511	0
	A	1,150	755	0
	Critical Habitat	n/a	453	0
	B	1,150	755	0
	Critical Habitat	n/a	453	0
Amendment 80 sectors	Total	20,696	13,595	9,337
	A	10,348	6,798	4,668
	B	10,348	6,798	4,668
Alaska Groundfish Cooperative	Total[6]	11,616	8,116	5,742
	A	5,808	4,058	2,871
	Critical Habitat	n/a	2,435	1,723
	B	5,808	4,058	2,871
	Critical Habitat	n/a	2,435	1,723
Alaska Seafood Cooperative	Total[6]	9,080	5,479	3,594
	A	4,540	2,740	1,797
	Critical Habitat	n/a	1,644	1,078
	B	4,540	2,740	1,797
	Critical Habitat	n/a	1,644	1,078

[1] Section 679.20(a)(8)(ii) allocates the Atka mackerel TACs, after subtracting the CDQ reserves, jig gear allocation, and ICAs to the Amendment
[2] Regulations at §§ 679.20(a)(8)(ii)(A) and 679.22(a) establish temporal and spatial limitations for the Atka mackerel fishery.
[3] The seasonal allow ances of Atka mackerel are 50 percent in the A season and 50 percent in the B season.
[4] Section 679.23(e)(3) authorizes directed fishing for Atka mackerel w ith traw l gear during the A season from January 20 to June 10 and the B
[5]Section 679.20(a)(8)(ii)(C)(1)(i) limits no more than 60 percent of the annual TACs in Areas 542 and 543 to be caught inside of critical habitat;
[6] Section 679.20(a)(8)(i) requires that up to 2 percent of the Eastern Aleutian District and the Bering Sea subarea TAC be allocated to jig gear
Note: Seasonal or sector apportionments may not total precisely due to rounding.

Table 14 provides fishery closure dates for the AI Atka mackerel fishery (for both Amendment 80 and BSAI TLA) from 2013 through 2015. As shown in the table, the Atka mackerel fishery stays open year round for the Amendment 80 sector for both CAI and EAI areas, while the BSAI TLA fishery generally closes on TAC prior to the end of the season in the CAI, but remains open year round in the EAI.

Table 14 Status of the AI Atka mackerel from 2013 through 2015

Year	Area	Amendment 80			BSAI TLA		
		Action	Purpose	Date	Action	Purpose	Date
2013	EAI	Closed to Reg. Nov 1			Closed	TAC	25-Oct
	CAI	Closed to Reg. Nov 1			Closed	TAC	30-Apr
					Closed	TAC	25-Oct
2014	EAI	Closed to Reg. Nov 1			Nothing to report		
	CAI	Closed to Reg. Nov 1			Closed	TAC	12-Feb
2015	EAI	Closed to Reg. Dec 31			Nothing to report		
	CAI	Closed to Reg. Dec 31			Closed	TAC	12-Feb
					Closed	TAC	13-Aug

Source: NMFS Final Specifications

TLA = trawl limited access

Catch and Effort

Table 15 and Table 16 provide information on catch and vessel history in the AI Atka mackerel fishery from 2003 through 2015. The AI BSAI TLA Atka mackerel fishery is entirely an offshore fishery. As seen from Table 15, the AI BSAI TLA Atka mackerel catch is confidential for all years except 2015, due to the limited number of offshore processors that participated in the fishery. From 2003 through 2006, there was no mothership activity in the AI Atka mackerel fishery. Starting in 2007, one CV delivered AI Atka mackerel to one Amendment 80 CP acting as a mothership. From 2008 through 2011, up to three CVs delivered AI BSAI TLA Atka mackerel to that same Amendment 80 CP acting as a mothership. In 2012, an AFA CP began targeting AI TLA Atka mackerel and has continued every year since. The AFA CP activity is limited to the CAI because the AFA CP sideboard limit is zero in the EAI. Also, AFA sideboard limits for Atka mackerel prevent directed fishing in all areas by the non-exempt AFA CVs. The BSAI TLA Atka mackerel fishery has fully harvested its TAC most years since 2008. In 2015, a CV entered the fishery for the first time delivering AI BSAI Atka mackerel to two Amendment 80 CP participants acting as motherships for the first time.

Table 15 BSAI Atka mackerel ITAC and BSAI TLA allocation and AI Atka mackerel target catch and vessel counts from 2003 through 2015

Year	BSAI Atka mackerel ITAC** (mt)	BSAI Atka mackerel TLA allocation (mt)	AI Atka mackerel target catch 2003-2007*** & TLA target catch 2008-2015 (mt)	CV count	Offshore processor count	Total catch of AI Atka mackerel**** (mt)
2003	51,000		0	0		88
2004	53,550		0	0		77
2005	53,550	N/A	0	0		33
2006	53,550		0	0		41
2007	53,550		*	1	1	1,060
2008	54,205	753	*	2	1	787
2009	68,225	2,114	*	1	1	2,183
2010	66,082	2,845	*	1	1	2,328
2011	47,400	3,659	*	3	1	3,551
2012	45,331	4,272	*	4	2	4,176
2013	23,147	2,066	*	4	2	2,019
2014	28,863	2,680	*	4	2	2,725
2015	48,669	3,812	3,843	6	4	3,863

Source file: AMCK_TGT-AI(2-29)

* Denotes confidential data

**ITAC=TAC-CDQ

***Catch of AI Atka mackerel target catch by AM80 vessels has been removed from Atka mackerel AI target catch (2003-2007)

****Total catch includes target for TLA vessels and incidental catch for AI Atka mackerel for all vessels

TLA=trawl limited access

Table 16 Years vessels participated in the AI Atka mackerel fishery (2003-2007) and the AI BSAI TLA Atka mackerel fishery (2008-2015)

Vessel Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total years active
CV 1					X	X	X	X	X	X	X	X	X	9
CV 2						X								1
CV 3									X				X	2
CV 4									X	X	X	X	X	5
CV 5									X	X	X	X	X	5
CV 6													X	1
CP										X	X	X	X	4
CP-M 1					X	X	X	X	X	X	X	X	X	9
CP-M 2													X	1
CP-M 3													X	1

Source file: AMCK_TGT-AI(2-29)

CP-M is a catcher processor acting as a mothership

Although halibut mortality for the AI Atka mackerel fishery is confidential every year except 2015, halibut mortality in the AI fishery is very limited (Table 17). In 2015, the halibut mortality in the AI BSAI TLA Atka mackerel fishery was 11 mt.

Table 17 Halibut PSC limit for BSAI TLA pollock/Atka mackerel/other species fisheries and halibut mortality in the AI BSAI TLA Atka mackerel fishery

Year	TLA Halibut PSC limit (mt)	Halibut mortality (mt)
2008	125	*
2009	175	*
2010	190	*
2011	250	*
2012	250	*
2013	250	*
2014	250	*
2015	250	11

Source file: PSC_TGT_AI(3-9)

* Denotes confidental data

Summary

The following are summary observations from the review of the AI TLA Atka mackerel fishery:

- The AI BSAI TLA Atka mackerel fishery is entirely an offshore fishery.
- The AI BSAI TLA Atka mackerel fishery generally closes on TAC prior to the end of the season in the CAI, but remains open year round in the EAI.
- From 2008 through 2011, up to 3 CVs delivered AI BSAI TLA Atka mackerel to one Amendment 80 CP acting as a mothership.
- In 2012, an AFA CP entered the fishery and has participated every year since 2012.
- The AI BSAI TLA Atka mackerel has fully harvested its TAC in most years since 2008.
- In 2015, a CV entered the fishery for the first time delivering AI BSAI Atka mackerel to two Amendment 80 CP participants acting as motherships for the first time.

4 Pacific ocean perch

Management

Since 2008, Pacific ocean perch (POP) has been allocated between the Amendment 80 sector and BSAI TLA sector, after subtracting 10.7 percent for the CDQ reserve and an ICA for the BSAI TLA sector and

vessels using non-trawl gear. The ICA has ranged from 100 mt to 200 mt for the Eastern AI, 10 mt to 75 mt for the Central AI, and 10 mt to 50 mt for the Western AI. The allocation between the Amendment 80 and TLA sectors was phased in over a period of two years. In 2008, the allocation of the CAI and EAI POP to the Amendment 80 sector was 95 percent and in 2009 it was 90 percent, where it has been since. In the WAI, 98 percent of the POP TAC is allocated to the Amendment 80 sector.

Table 18, Table 19, and Table 20 provide historical ABC, TAC, ITAC, and Amendment 80 and BSAI TLA allocations for EAI, CAI, and WAI POP from 2003 through 2015. Table 21 provides the 2015 spatial allowances, CDQ reserve, ICA, and Amendment 80 and TLA allocations of AI POP TAC.

Table 18 EAI POP ABC, TAC, ITAC, AM80 and BSAI TLA allocations, 2003-2015 (all amounts are in metric tons)

Year	ABC	TAC	ITAC	AM80	TLA
2003	5,880	4,000	3,400		
2004	4,740	3,500	2,975		
2005	3,210	3,080	2,618	N/A	
2006	3,256	3,080	2,618		
2007	4,970	4,970	4,225		
2008	4,900	4,900	4,376	4,062	214
2009	4,200	4,200	3,751	3,286	365
2010	4,220	4,220	3,768	3,302	367
2011	5,660	5,660	5,054	4,459	495
2012	5,620	5,620	5,019	4,427	492
2013	9,790	9,790	8,742	7,688	854
2014	9,246	9,246	8,257	7,251	806
2015	8,312	8,000	7,144	6,340	704

Source: NMFS Final Specifications
TLA = trawl limited access
*ITAC = TAC-CDQ

Table 19 CAI POP ABC, TAC, ITAC, AM80 and BSAI TLA allocations, 2003-2015 (all amounts are in metric tons)

Year	ABC	TAC	ITAC	AM80	TLA
2003	3,920	2,680	2,278		
2004	3,162	2,700	2,295		
2005	3,165	3,035	2,580	N/A	
2006	3,212	3,035	2,580		
2007	5,050	5,050	4,293		
2008	4,990	4,990	4,456	3,776	420
2009	4,260	4,260	3,804	3,415	379
2010	4,270	4,270	3,813	3,387	376
2011	4,960	4,960	4,429	3,919	435
2012	4,990	4,990	4,456	3,943	438
2013	6,980	6,980	6,233	5,542	616
2014	6,594	6,594	5,888	5,232	581
2015	7,723	7,000	6,251	5,558	618

Source: NMFS Final Specifications
TLA = trawl limited access
ITAC = TAC-CDQ

Table 20 WAI POP ABC, TAC, ITAC, AM80 and BSAI TLA allocations, 2003-2015 (all amounts are in metric tons)

Year	ABC	TAC	ITAC	AM80	TLA
2003	5,850	5,850	4,973		
2004	5,187	5,187	4,409		
2005	5,305	5,085	4,322		N/A
2006	5,372	5,085	4,322		
2007	7,720	7,720	6,562		
2008	7,610	7,610	6,796	6,650	136
2009	6,520	6,520	5,822	5,696	116
2010	6,540	6,540	5,840	5,674	116
2011	8,370	8,370	7,474	7,315	149
2012	8,380	8,380	7,483	7,324	149
2013	10,200	10,200	9,109	8,917	182
2014	9,598	9,598	8,571	8,390	171
2015	10,182	9,000	8,037	7,866	161

Source: NMFS Final Specifications
TLA = trawl limited access
*ITAC = TAC-CDQ

Table 21 Final 2015 Area TACs, CDQ reserve, incidental catch allowance, and Amendment 80 and BSAI TLA allocations of the AI POP TAC (all amounts are in metric tons)

Sector	Pacific ocean perch		
	Eastern Aleutian District	Central Aleutian District	Western Aleutian District
TAC	8,000	7,000	9,000
CDQ	856	749	963
ICA	100	75	10
BSAI trawl limited access	704	618	161
Amendment 80	6,340	5,558	7,866
Alaska Groundfish Cooperative	3,362	2,947	4,171
Alaska Seafood Cooperative	2,978	2,611	3,695

Source: NMFS Final Specifications

Table 22 provides fishery closure dates for the AI POP fisheries (for both Amendment 80 and BSAI TLA) from 2013 through 2015. The table indicates that POP fisheries stays open year round for the Amendment 80 sector, while the TLA fishery generally closes on TAC prior to the end of the season in all three areas of the AI.

Table 22 Status of the AI POP from 2013 through 2015

Year	Area	Amendment 80			BSAI TLA		
		Action	Purpose	Date	Action	Purpose	Date
2013	EAI	Closed Reg. Dec 31			Closed	TAC	25-Oct
	CAI				Closed	TAC	25-Oct
	WAI				Closed	TAC	12-Jul
2014	EAI	Closed Reg. Dec 31			Closed	TAC	6-Nov
	CAI				Closed	TAC	13-Aug
	WAI				Closed	TAC	11-Jul
2015	EAI	Closed Reg. Dec 31			Closed	TAC	22-Apr
	CAI				Closed	TAC	20-Apr
	WAI				Closed	TAC	27-Apr

Source: NMFS Final Specifications
TLA = trawl limited access

Catch and Effort

Table 23 and Table 24 provide information on catch and vessel history in the AI POP target fishery from 2003 through 2015. The AI BSAI TLA POP fishery is entirely an offshore fishery. As seen from the table, the AI BSAI TLA POP catch is confidential for all years due to the limited number of CVs and offshore processors that participated in the target fishery. Total catch, which includes incidental catch of AI BSAI POP from all vessels, is included in the table. From 2003 through 2006, there was no mothership activity in the AI POP fishery. In 2007, two CVs delivered AI Atka mackerel to one Amendment 80 CP acting as a mothership. From 2008 through 2014, one to three CVs delivered AI BSAI TLA POP to the same Amendment 80 CP acting as a mothership. In 2015, the fishery was fully harvested for the first time, and a new CV participate enter the fishery delivering AI BSAI TLA POP to two Amendment 80 CPs acting as motherships for the first time .

Table 23 Allocation, target catch, and vessel counts for AI POP from 2003 through 2015

Year	AI POP ITAC* (mt)	AI POP TLA allocation (mt)	AI POP target catch 2003-2007** & TLA target catch 2008-2015 (mt)	CV count	Offshore processor count	Total catch of AI POP*** (mt)
2003	10,651		0	0	0	48
2004	9,679		0	0	0	45
2005	9,520	N/A	0	0	0	64
2006	9,520		0	0	0	49
2007	15,080		*	2	1	509
2008	15,628	770	*	2	1	560
2009	13,377	860	*	2	1	884
2010	13,421	859	*	2	2	922
2011	16,957	1,079	*	1	1	1,111
2012	16,958	1,079	*	2	1	1,249
2013	24,084	1,652	*	1	1	1,641
2014	22,716	1,558	*	3	1	1,670
2015	21,432	1,483	*	3	3	1,645

Source file: POP_TGT-AI(2-29)

* Denotes confidential data

**ITAC=TAC-CDQ

***Catch of AI POPtarget catch by AM80 vessels has been removed from POP AI target catch (2003-2007)

****Total catch includes target for TLA vessels and incidental catch for AI POP for all vessels

TLA=trawl limited access

Table 24 Years vessels participated in the AI POP fishery (2003-2007) and the AI BSAI TLA POP fishery (2008-2015)

Vessel Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total years active
CV 1					X	X	X	X		X		X	X	7
CV 2					X	X								2
CV 3							X	X	X		X	X		5
CV 4										X		X	X	3
CV 5													X	1
CP-M 1					X	X	X	X	X	X	X	X	X	9
CP-M 2								X						1
CP-M 3													X	1
CP-M 4													X	1

Source file: POP_TGT-AI(2-29)

CP-M is a catcher processor acting as a mothership

Table 25 shows halibut PSC limit for the BSAI TLA rockfish fisheries and halibut mortality in the AI BSAI TLA POP fishery. Due to the limit number of vessels that participated in this fishery during the

2008 through 2015 period, halibut mortality is confidential. In general, halibut mortality in this fishery is very limited.

Table 25 Halibut PSC limit for BSAI TLA rockfish fisheries and halibut mortality in the AI BSAI TLA POP fishery

Year	TLA Halibut PSC limit (mt)	Halibut mortality (mt)
2008	3	*
2009	5	*
2010	5	*
2011	5	*
2012	5	*
2013	5	*
2014	5	*
2015	5	*

Source file: PSC_TGT_AI(3-9)

* Denotes confidental data

Summary

The following are summary observations from the review of the AI BSAI TLA POP fishery:

- The AI BSAI TLA POP target fishery is entirely an offshore fishery.
- The AI BSAI TLA POP fishery generally closes on TAC prior to the end of the season in all three areas of the AI.
- From 2008 through 2014, up to 3 CVs delivered AI BSAI TLA POP to one Amendment 80 CP acting as a mothership.
- In 2015, the AI BSAI TLA POP TAC was fully harvested for the first time. In addition, a new CV participant entered the fishery delivering AI BSAI TLA POP to two Amendment 80 CP participants acting as motherships for the first time.

5 Arrowtooth flounder

Management

The BSAI arrowtooth flounder fishery is open for directed fishing for both the non-trawl and Amendment 80 sectors from May 1 through December 31. Currently, the Amendment 80 sector is the only trawl sector that targets arrowtooth flounder since they use their halibut PSC for this fishery (see Table 27). As noted in Table 27, during the 2013 through 2015 period, the fishery closed prior to the end of the season only in 2013 due to low TAC. Table 26 provides ABC, TAC, and ITAC for arrowtooth flounder fishery from 2003 through 2015.

Table 26 BSAI arrowtooth flounder ABC, TAC, and ITAC 2003-2015 (all amounts are in metric tons)

Year	ABC	TAC	ITAC
2003	114,000	83,750	71,188
2004	114,000	86,075	73,164
2005	108,000	12,000	10,200
2006	136,000	13,000	11,050
2007	158,000	20,000	17,000
2008	244,000	75,000	63,750
2009	156,000	75,000	63,750
2010	156,000	75,000	63,750
2011	153,000	25,900	22,015
2012	150,000	25,000	21,250
2013	152,000	25,000	21,250
2014	106,599	25,000	21,250
2015	80,547	22,000	18,700

Source: NMFS Final Specifications
ITAC = TAC-CDQ

Table 27 Status of BSAI arrowtooth flounder from 2013 through 2015

Year	Amendment 80			BSAI TLA		
	Action	Purpose	Date	Action	Purpose	Date
2013	Closed	Reg	1-Jan	Closed	Reg	1-Jan
	Closed	TAC	21-Aug			
2014	Closed	Reg	1-Jan	Closed	Reg	1-Jan
	Closed Reg. Dec 31					
2015	Closed	Reg	1-Jan	Closed	Reg	1-Jan
	Closed Reg. Dec 31					

Source: NMFS Final Specifications
TLA = trawl limited access

Catch and Effort

Table 28 and Table 29 provide information on catch and vessel history in the AI arrowtooth flounder target fishery from 2003 through 2015. In general, fishing effort in the AI arrowtooth flounder fishery is very limited. From 2003 through 2005, no vessels targeted AI arrowtooth flounder because none of the halibut PSC limit was apportioned to the Greenland turbot/arrowtooth/sablefish fishery category. Starting in 2006, a few vessels began targeting AI arrowtooth flounder. On average, from 2006 through 2015 (years of reported target catch), nine percent of the BSAI arrowtooth flounder ITAC has been harvested in the AI. The percent of ITAC harvested in the AI has ranged from a high of 36 percent in 2010, most of which was Kamchatka flounder, to a low of four percent in 2012.[4] Vessel participation has been limited to CPs, and nearly all of those vessels are from the Amendment 80 sector. Since 2006, 17 CPs have targeted AI arrowtooth flounder with most participating in the fishery only one or two years. Three CPs participated in the fishery for four years.

[4] Prior to 2011, BSAI Kamchatka flounder ABC/TAC was included with BSAI arrowtooth flounder ABC/TAC.

Table 28 BSAI ITAC, target catch, and vessel counts in the AI arrowtooth flounder fishery from 2003 through 2015**

Year	ITAC (mt)**	Target catch (mt)**	% of ITAC	Vessel count
2003	71,188	0	0	0
2004	73,164	0	0	0
2005	10,200	0	0	0
2006	11,050	*	*	1
2007	17,000	*	*	2
2008	63,750	*	*	2
2009	63,750	8,746	14	3
2010	63,750	23,016	36	6
2011	22,015	1,182	5	7
2012	21,250	763	4	5
2013	21,250	3,629	17	6
2014	21,250	2,217	10	4
2015	18,700	*	*	1

Source file: W_T_M_TGT-AI(3-1)

ITAC = TAC-CDQ

* Denotes confidentiality

** Prior to 2011, any arrow tooth ITAC and catch included Kamchatka flounder

Table 29 Years vessels participated in the AI arrowtooth flounder fishery (2003-2015)

Vessel Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total years active
CP 1				X	X									2
CP 2					X									1
CP 3						X	X	X		X				4
CP 4						X	X	X			X			4
CP 5							X	X						2
CP 6								X						1
CP 7								X						1
CP 8								X	X					2
CP 9									X		X	X	X	4
CP 10									X	X				2
CP 11									X					1
CP 12									X	X	X			3
CP 13									X	X				2
CP 14									X					1
CP 15										X	X	X		3
CP 16											X	X		2
CP 17											X	X		2

Source file: W_T_M_TGT-AI(3-1)

Table 30 shows BSAI halibut PSC limit for the Amendment 80 cooperatives, BSAI TLA Greenland turbot/arrowtooth/sablefish fisheries, and halibut mortality in the AI arrowtooth flounder fishery for the Amendment 80 sector. Halibut mortality in the AI arrowtooth flounder fishery has ranged from a low of 15 mt in 2012 to a high of 134 mt in 2010. On average, the Amendment 80 cooperatives utilize 2 percent of their total halibut PSC limit for the AI arrowtooth flounder fishery on an annual basis. Since the Amendment 80 sector is the only trawl sector that uses halibut PSC limit for this fishery, there was no halibut mortality in the AI BSAI TLA arrowtooth flounder fishery.

Table 30 BSAI halibut PSC limit for Amendment 80 cooperatives, BSAI TLA Greenland turbot/arrowtooth/sablefish fisheries, and halibut mortality in the AI arrowtooth flounder fishery by Amendment 80 cooperatives

Year	AM80 Halibut PSC limit (mt)**	TLA Halibut PSC limit (mt)	Halibut mortality (mt)
2008	2,525	0	*
2009	2,475	0	45.62
2010	2,425	0	133.88
2011	2,375	0	21.13
2012	2,325	0	14.74
2013	2,325	0	58.93
2014	2,325	0	45.02
2015	2,325	0	*

Source file: PSC_TGT_AI(3-9)

* Denotes confidental data

** AM80 assigns halibut PSC at vessel level

Summary

The following are summary observations from the review of the AI arrowtooth flounder fishery:

- The AI arrowtooth flounder fishery is entirely an offshore fishery.
- Since 2013, the fishery closed only once prior to the end of the season.
- Currently, the Amendment 80 sector is the only trawl sector that targets AI arrowtooth flounder
- On average, from 2006 through 2015, nine percent of the BSAI arrowtooth flounder ITAC was harvested in the AI.
- Nearly all CPs are Amendment 80.
- Since 2006, 17 CPs have targeted AI arrowtooth flounder with most participating one or two years.

6 Greenland turbot

Management

Since 2013, directed fishing for Greenland turbot in the AI has been closed due to low TACs (see Table 32). When the fishery was open for directed fishing, the hook-and-line CP and Amendment 80 sectors targeted AI Greenland turbot. These two sectors currently have an agreement to negotiate management of the AI fishery if there is a directed fishery in the future. Table 31 provides ABC, TAC, and ITAC for AI Greenland turbot from 2003 through 2015.

Table 31 AI Greenland turbot ABC, TAC, and ITAC 2003-2015 (all amounts are in metric tons)

Year	ABC	TAC	ITAC
2003	1,960	1,320	1,122
2004	1,578	800	680
2005	1,210	800	680
2006	850	850	723
2007	760	760	646
2008	790	790	672
2009	2,290	2,290	1,947
2010	1,900	1,900	1,615
2011	1,550	1,550	1,318
2012	2,430	2,430	2,066
2013	450	450	383
2014	465	465	395
2015	724	200	170

Source: NMFS Final Specifications
ITAC = TAC-CDQ

Table 32 Status of AI Greenland turbot from 2013 through 2015

Year	Amendment 80			BSAI TLA and H&L		
	Action	Purpose	Date	Action	Purpose	Date
2013	Closed	Reg	1-Jan	Closed	Reg	1-Jan
	Closed	TAC	1-May	Closed	TAC	1-May
2014	Closed	Reg	1-Jan	Closed	Reg	1-Jan
	Closed	TAC	1-May	Closed	TAC	1-May
2015	Closed	Reg	1-Jan	Closed	Reg	1-Jan
	Closed	TAC	1-May	Closed	TAC	1-May

Source: NMFS Final Specifications
TLA = trawl limited access

Catch and Effort

Table 33 and Table 34 provide information on catch and vessel history in the AI Greenland turbot target fishery from 2003 through 2015. In general, fishing effort in the AI Greenland turbot fishery has been very limited. On average, during the years of reported targeted catch, 28 percent of the AI Greenland turbot ITAC was targeted. The percent of ITAC harvested in the AI has ranged from a high of 69 percent in 2009 to a low of 0 percent in 2003 and 2012. Since 2013, the fishery has been closed to directed fishing.

Vessel participation has been limited to CPs, which have been a mix of Amendment 80 and hook-and-line CPs. Since 2003, 17 CPs have targeted AI Greenland turbot with most participating in the fishery only one or two years. One CP participated in the fishery for three years.

Table 33 ITAC, target catch, and vessel counts in the AI Greenland turbot fishery from 2003 through 2015

Year	ITAC (mt)	Target catch (mt)	% of ITAC	Vessel count
2003	1,122	63	0	5
2004	680	*	*	1
2005	680	*	*	2
2006	723	101	13.98	4
2007	646	243	38	3
2008	672	*	*	1
2009	1,947	1,340	69	4
2010	1,615	203	13	4
2011	1,318	*	*	1
2012	2,066	0	0	0
2013	383	0	0	0
2014	395	0	0	0
2015	170	0	0	0

Source file: W_T_M_TGT-AI(3-1)

ITAC = TAC-CDQ

* Denotes confidentiality

Table 34 Years vessels participated in the AI Greenland turbot fishery (2003-2015)

Vessel Type	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	Total years active
CP 1	X	X			X									3
CP 2	X													1
CP 3	X			X										2
CP 4	X													1
CP 5	X													1
CP 6			X	X										2
CP 7			X											1
CP 8				X										1
CP 9				X	X									2
CP 10					X									1
CP 11						X	X							2
CP 12							X	X						2
CP 13							X							1
CP 14							X							1
CP 15								X						1
CP 16								X	X					2
CP 17								X						1

Source file: W_T_M_TGT-AI(3-1)

In general, halibut mortality in the AI Greenland turbot fishery, when open for directed fishing, has been very low (Table 35). As noted in the table, halibut mortality in the AI Greenland turbot fishery for the years of observed halibut mortality (2009 and 2010) was less than one percent of the combined hook-and-line and Amendment 80 halibut PSC limits. From 2013 through 2015, the fishery was closed due to low TACs.

Table 35 BSAI halibut PSC limit for hook-and-line vessels, Amendment 80 cooperatives, BSAI TLA Greenland turbot/arrowtooth/sablefish fisheries, and halibut mortality in the AI Greenland turbot fishery by hook-and-line vessels and Amendment 80 cooperatives

Year	H&L CP (mt)	AM80 Halibut PSC limit (mt)*	TLA Halibut PSC limit (mt)	Halibut mortality (mt)
2008	58	2,525	0	0.00
2009	58	2,475	0	4.54
2010	58	2,425	0	3.21
2011	58	2,375	0	*
2012	58	2,325	0	0
2013	58	2,325	0	Fishery closed
2014	58	2,325	0	Fishery closed
2015	58	2,325	0	Fishery closed

Source file: PSC_TGT_AI(3-8)

* Denotes confidental data

** AM80 assigns halibut PSC at vessel level

Summary

The following are summary observations from the review of the AI Greenland turbot fishery:

- Since 2013, the AI Greenland turbot fishery has been closed due to low TAC.
- The two sectors that have targeted AI Greenland turbot, hook-and-line CP sector and Amendment 80 sector, currently have an agreement to minimize catch of Greenland turbot in the AI. If the TAC increased to a level that would allow a directed fishery then the two sectors would agree to negotiate management of the AI fishery.
- On average, during years of reported target catch, 28 percent of the AI Greenland turbot ITAC has been harvested.
- Since 2003, 17 CPs have targeted AI Greenland turbot with most participating in the fishery only one or two years.

7 Kamchatka flounder

Management

The BSAI Kamchatka flounder fishery season is open for directed fishing for both the non-trawl and Amendment 80 sectors is from May 1 through December 31. The Amendment 80 sector is the only trawl sector that targets Kamchatka flounder since they choose to use their halibut PSC limit for this fishery (see Table 37) and the BSAI TLA sector does not allocate halibut PSC limit to this target fishery. Table 36 provides ABC, TAC, and ITAC for BSAI Kamchatka flounder from 2003 through 2015. Prior to 2011, BSAI Kamchatka flounder ABC/TAC was included with BSAI arrowtooth flounder ABC/TAC. As noted in Table 37, the BSAI Kamchatka flounder fishery, since 2013, has closed on TAC prior to the end of the season each year.

Table 36 BSAI Kamchatka flounder ABC, TAC, and ITAC 2003-2015 (all amounts are in metric tons)

Year	ABC	TAC	ITAC
2003			
2004			
2005			
2006	Prior to 2011, Kamchatka flounder ABC/TAC was included		
2007	as part of the arrowtooth flounder ABC/TAC		
2008			
2009			
2010			
2011	17,700	17,700	15,045
2012	18,600	17,700	15,045
2013	12,200	10,000	8,500
2014	7,100	7,100	6,035
2015	9,000	6,500	5,525

Source: NMFS Final Specifications
ITAC = TAC-CDQ

Table 37 Status of the BSAI Kamchatka flounder for trawl sectors from 2013 through 2015

Year	Amendment 80			BSAI TLA		
	Action	Purpose	Date	Action	Purpose	Date
2013	Closed	Reg	1-Jan	Closed	Reg	1-Jan
	Closed	TAC	8-Jul			
2014	Closed	Reg	1-Jan	Closed	Reg	1-Jan
	Closed	TAC	23-Aug			
2015	Closed	Reg	1-Jan	Closed	Reg	1-Jan
	Closed	TAC	6-Jun			

Source: NMFS Final Specifications
TLA = trawl limited access

Catch and Effort

Table 38 and Table 39 provide information on catch and vessel history in the AI Kamchatka flounder target fishery from 2011 through 2015. In general, fishing effort in the AI Kamchatka flounder fishery has been very limited. On average, from 2011 through 2015, 25 percent of the BSAI Kamchatka flounder ITAC was harvested in the AI. The percent of BSAI ITAC harvested in the Kamchatka flounder target in the AI has ranged from a high of 38 percent in 2012 to a low of 14 percent in 2014 and 2015. Vessel participation has been limited to Amendment 80 sector. Since 2011, 13 CPs have targeted AI Kamchatka flounder. Two CPs participated in the fishery all five years and two for four years.

Table 38 BSAI ITAC and AI target catch and vessel counts in the Kamchatka flounder fishery from 2011 through 2015

Year	ITAC (mt)	Target catch (mt)	% of ITAC	Vessel count
2011	15,045	4,177	28	11
2012	15,045	5,719	38	9
2013	8,500	2,464	29	5
2014	6,035	825	14	4
2015	5,525	777	14	4

Source file: W_T_M_TGT-AI(3-1)
ITAC = TAC-CDQ

Table 39 Years vessels participated in the AI Kamchatka flounder fishery (2011-2015)

Vessel Type	2011	2012	2013	2014	2015	Total years active
CP 1	X					1
CP 2	X	X	X	X	X	5
CP 3	X	X	X		X	4
CP 4	X	X	X	X	X	5
CP 5	X	X				2
CP 6	X			X		2
CP 7	X	X				2
CP 8	X					1
CP 9	X	X	X			3
CP 10	X	X				2
CP 11	X					1
CP 12		X	X	X	X	4
CP 13		X				1

Source file: W_T_M_TGT-AI(3-1)

Table 40 shows BSAI halibut PSC limit for the Amendment 80 cooperatives, BSAI TLA Greenland turbot/arrowtooth/sablefish fisheries, and halibut mortality in the AI Kamchatka flounder fishery for the Amendment 80 cooperatives from 2011 through 2015. Prior to 2011, Kamchatka flounder ABC/TAC was included with arrowtooth flounder ABC/TAC. Halibut mortality in the Amendment 80 AI Kamchatka flounder fishery has ranged from a low of 11 mt in 2014 and 2015 to a high of 89 mt in 2012. On average, the Amendment 80 cooperatives utilized 2 percent of their total halibut PSC limit for the AI Kamchatka flounder fishery. Since the Amendment 80 sector is the only trawl sector that targets this fishery, there was no halibut mortality in the AI BSAI TLA Kamchatka flounder fishery.

Table 40 BSAI halibut PSC limit for Amendment 80 cooperatives, BSAI TLA Greenland turbot/arrowtooth/sablefish fisheries, and halibut mortality in the AI Kamchatka flounder fishery by Amendment 80 cooperatives

Year	AM80 Halibut PSC limit (mt)*	TLA Halibut PSC limit (mt)	Halibut mortality (mt)
2008	2,525	0	
2009	2,475	0	
2010	2,425	0	
2011	2,375	0	59.08
2012	2,325	0	88.58
2013	2,325	0	36.25
2014	2,325	0	10.62
2015	2,325	0	10.61

Source file: PSC_TGT_AI(3-8)

* AM80 assigns halibut PSC at vessel level

Summary

The following are summary observations from the review of the AI Kamchatka flounder fishery:

- Prior to 2011, BSAI Kamchatka flounder ABC/TAC was combined with BSAI arrowtooth flounder ABC/TAC.
- The AI Kamchatka flounder fishery is entirely an offshore fishery.
- Vessel participation has been limited to Amendment 80 sector.

- Since 2013, the AI Kamchatka flounder fishery has closed on TAC prior to the end of the season.
- In the AI, on average, from 2011 through 2015, 25 percent of the BSAI Kamchatka flounder ITAC has been harvested. (The remaining amount is harvested in the BS.)
- Since 2011, 13 CPs harvest targeted AI Kamchatka flounder.