PUBLIC REVIEW DRAFT

Environmental Assessment/ Regulatory Impact Review/
Initial Regulatory Flexibility Analysis
for Proposed Amendment
to the Fishery Management Plan for Groundfish of the Bering Sea/Aleutian Islands Management Area

AI Pacific Cod Catcher Vessel Fishery & Shoreplant Delivery Requirement

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Abstract: This Regulatory Impact Review/Environmental Assessment/Initial Regulatory Flexibility Analysis analyzes proposed management measures that would apply to catcher vessels (CVs) targeting Pacific cod in the Bering Sea (BS) and Aleutian Islands (AI). The management measures under consideration would limit the AI Pacific cod fishery during a specific period to CVs exclusively and designate a portion of the AI Pacific cod total allowable catch (TAC) for delivery to shoreplants in the AI. The intent of this action is to provide some stability to these AI shoreplant operations and the communities dependent on shoreside processing activity.

List of Acronyms and Abbreviations

AAC	Alaska Administrative Code
ABC	acceptable biological catch
ADF&G	Alaska Department of Fish and Game
AFA	American Fisheries Act
AFSC	Alaska Fisheries Science Center
AI	Aleutian Islands
AKRO	NMFS Alaska Region
ANCSA	Alaska Native Claim Settlement Act
AP	Advisory Panel
APICDA	Aleutian Pribilof Island Community Development Association
BiOp	Biological Opinion
BOF	Board of Fish
BS	Bering Sea
BSAI	Bering Sea and Aleutian Islands
CAS	Catch Accounting System
CDQ	Community Development Quota
CEQ	Council on Environmental Quality
CFEC	Commercial Fisheries Entry Commission
CFR	Code of Federal Regulations
Council	North Pacific Fishery Management Council
CP	catcher/processor
CV	Catcher vessel
DCRA	Division of Community and Regional Affairs
DPS	distinct population segment
E	East
E.O.	Executive Order
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	essential fish habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
FLCC	Freezer Longline Conservation Cooperative
FMA	Fisheries Monitoring and Analysis
FMP	fishery management plan
FR	*Federal Register*
FRFA	Final Regulatory Flexibility Analysis
ft	foot or feet
GHL	guideline harvest level
GOA	Gulf of Alaska
H&G	head and gut
ICA	Incidental catch allowance
IRFA	Initial Regulatory Flexibility Analysis
IPA	Incentive Plan Agreement
IQF	individually quick frozen
IRA	Indian Reorganization Act
ITAC	Initial total allowable catch
JAM	jeopardy or adverse modification
JV	joint venture
lb(s)	pound(s)
LAPP	Limited Access Privilege Program
LEI	long-term effect index
LLP	license limitation program
LOA	length overall
m	meter or meters
MSA	Magnuson-Stevens Fishery Conservation and Management Act
MMPA	Marine Mammal Protection Act
MSST	minimum stock size threshold
mt	metric ton
NAO	NOAA Administrative Order
NEPA	National Environmental Policy Act
NMFS	National Marine Fishery Service
NOAA	National Oceanographic and Atmospheric Administration
NPFMC	North Pacific Fishery Management Council
NPPSD	North Pacific Pelagic Seabird Database
Observer Program	North Pacific Groundfish Observer Program
OEG	optimal escapement goal
OFL	over fishing level
OMB	Office of Management and Budget
PBR	potential biological removal
PSC	prohibited species catch
PPA	Preliminary preferred alternative
PRA	Paperwork Reduction Act
PSEIS	Programmatic Supplemental Environmental Impact Statement
RAM	Restricted Access Management
RFA	Regulatory Flexibility Act
RFFA	reasonably foreseeable future action
RIR	Regulatory Impact Review
RPA	reasonable and prudent alternative
SAFE	Stock Assessment and Fishery Evaluation
SAR	stock assessment report
SBA	Small Business Act
Secretary	Secretary of Commerce
SSC	Science and Statistical Committee
SSL	Steller sea lion
TAC	total allowable catch
U.S.	United States
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
W	West
WDPS	Western distinct population segment

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Executive Summary

This document analyzes proposed management measures that would prioritize a portion of the Aleutian Islands (AI) Pacific cod total allowable catch (TAC) for access by catcher vessels (CVs) and require that it be delivered to shoreplants in the AI, with some constraints on the amount and dates by which the provisions would be removed. To accommodate the AI Pacific cod fishery for trawl CVs, the proposed action would also limit harvest of the A season trawl CV sector's Bering Sea (BS) Pacific cod allocation so as not to allow the sector to harvest its entire A season allocation in the BS prior to the start of the A season AI Pacific cod fishery.

Purpose and Need

For several years, the Council has periodically requested information to help determine the need for community protections in the AI in response to the implementation of rationalization programs for various fisheries. Rationalization has resulted in excess processing capacity that has been used in the AI Pacific cod fishery. The specific rationalization programs are American Fisheries Act (AFA), Bering Sea and Aleutian Islands (BSAI) crab rationalization, and BSAI Amendment 80. These programs provide benefits to processing vessels and afford opportunities for consolidation, thus freeing some processing capacity to target the non-rationalized BSAI Pacific cod fishery. At the same time, the Council has delayed action on AI community protections, in order to anticipate the effects of several dynamic factors in the AI Pacific cod fishery, not the least of which has been the anticipation of a BSAI total allowable catch (TAC) split and Steller sea lion protection measures.

The Council adopted a problem statement on February 2014 to develop new community protection measures, in response to the increased participation in the AI Pacific cod fishery by the rationalized sectors, a Pacific cod TAC split for the BS and AI that was implemented in 2014, and new Steller sea lion protection measures that were implemented in early 2015. During their February 2015 meeting the Council modified the statement to account for the Council's concern of the continued risk of increased processing participation by rationalized sectors in the non-rationalized AI Pacific cod fishery, which was the original reason the Council began focusing on AI shoreplant processor stability in 2008. The problem statement was also to account for the relatively low Pacific cod stock abundance in the AI. The following is the modified problem statement.

> *The American Fisheries Act, BSAI Crab Rationalization, and BSAI Amendment 80 management programs provided benefits to processing vessels that were intended to protect their investments in, and dependence on, the respective fishery resources. Each of these programs has also afforded participants opportunities for consolidation, allowing for increased participation in the non-rationalized BSAI Pacific cod fishery in the Aleutian Islands, thus increasing the risk that the historical share of BSAI cod of other industry participants and communities that depend on shoreplant processing in the region may be diminished. The BSAI Pacific cod TAC split and relatively low Pacific cod stock abundance in the Aleutian Islands further increase the need for community protections.*

Alternatives

The following are the Council adopted alternatives for analysis.

Alternative 1. No Action

Alternative 2. Prior to (**options:** March 1, 15, 21) the A season trawl CV Pacific cod harvest in the Bering Sea shall be limited to an amount equal to the BSAI aggregate CV trawl sector A season allocation minus the lessor of the AI directed Pacific cod non-CDQ TAC **or (options:** 3,000 mt, 5,000 mt, 7,000 mt). Directed fishing for AI Pacific cod is prohibited for all vessels except CVs delivering to shoreplants west of 170° longitude in the AI prior to **(options:** March 1,7, 15).

The following options are not mutually exclusive:

Option 1: Any amount of the AI Pacific cod non-CDQ TAC above the amount set-aside from the trawl CV BSAI allocation may be available to any sector for directed fishing and is not subject to the regional delivery requirement.

Option 2: If less than 50% of the AI Pacific cod non-CDQ TAC has been landed at the AI shoreplants[1] by (**options:** February 28, March 7, 15), the restriction on the delivery to other processors and the restriction on the trawl CV sector allocation shall be removed.

Option 3: If less than 1,000 mt of the AI Pacific cod non-CDQ TAC has been landed at the AI shoreplants[1] by (**options:** February 21, 28) the restriction on delivery to other processors and the restriction on the trawl CV sector allocation shall be suspended for the remainder of the year.

Option 4: If prior to (**options:** November 1, December 15), neither the City of Adak nor the City of Atka have notified NMFS of the intent to process Pacific cod in the upcoming year, the Aleutian Islands shoreplant[1] delivery requirement is suspended for the upcoming year. Cities can voluntarily provide notice prior to the selected date if they do not intend to process.

Option 5: Any processor that has processed cod in the Aleutian Islands management area in at least 12 years between 2000 and 2014 shall be exempt from these restrictions for processing levels up to 2,000 mt.

Shoreplant is defined as a processing facility physically located on land.

Regulatory Impact Review

Alternative 1- No Action

Alternative 1 is the no action alternative. This alternative would not establish an exclusive AI Pacific cod fishery for CV sectors or a set-aside for the CV sectors, nor require CV sectors to deliver their AI Pacific cod harvest to shoreplants west of 170 degrees longitude in the AI. This alternative would not limit trawl CV A season Pacific cod harvest in the BS to prevent the sector from harvesting their entire allocation before the AI Pacific cod TAC is taken. The following is a brief description of status quo.

The proportion of retained Pacific cod catch in the BS and AI management areas, excluding Community Development Quota (CDQ) harvest and State guideline harvest level (GHL) fishery catch, has changed

[1] To better reflect the Council's definition of shoreplant is a processing facility physically located on land, staff changed the wording in the option from shoreside, which could include stationary floating processors, to AI shoreplants, which would exclude stationary floating processors.

dramatically. Between 2003 and 2010, retained catch of Pacific cod from the AI ranged from a high of 18 percent to a low of 11 percent of the combined BSAI Pacific cod retained catch. Starting in 2011, the proportion of AI Pacific cod retained catch dropped to 5 percent and in some years was as low as 3 percent of the combined BSAI Pacific cod catch. Among the sectors that have been active in the AI Pacific cod fishery are the trawl CV and trawl catcher processor (CP) sectors. The trawl CV sector, on average, retained 28 percent of the BSAI Pacific cod from the AI during 2003 through 2015, while the trawl CP sector harvested, on average, 26 percent of their combined BSAI Pacific cod from the AI. Both sectors have seen a dramatic decline in the AI Pacific cod as a percent of their combined BSAI Pacific cod harvest, which is likely due in part to Steller sea lion protection measures implemented in 2011, and lower AI Pacific cod biomass.

The hook-and-line CP sector is the only other sector that has consistently participated in the AI Pacific cod fishery on annual basis. The hook-and-line CP sector had a much lower total annual harvest than the trawl CP and CV sectors with an average harvest of 3 percent of the AI Pacific cod fishery. In 2015, three hook-and-line CP vessels participated in the AI Pacific cod fishery prior to when the fishery closed on February 27.

Timing of the A season Pacific cod fishery differs between the BS and AI. In the BS, the fishery starts in earnest on January 20, with a peak in fishing around mid-February, followed by a slow decline in catch during March. In the AI, the season is significantly shorter, with fishing effort ramping up during the last two weeks in February and peaking in early March, followed by a dramatic decline in catch over the next two weeks. Since implementation of BS and AI Pacific cod TAC split in 2014, the closure of the AI Pacific cod fishery on March 16 in 2014 and February 27 in 2015 has shortened the timing of the AI Pacific cod fishery by a couple of weeks. In addition, utilizing the change in the Steller sea lion protection measures starting in 2015, which allows the hook-and-line CP sector to enter the fishery as early as January 1 in the AI, a few hook-and-line CP vessels started fishing during the first two weeks of the year (see Figure 6).

Historically, AI Pacific cod has been processed both by offshore vessels and shoreplants. The offshore sector's portion of the total AI Pacific cod processed has ranged from a low of 55 percent in 2013, to a high of 100 percent in 2011 and 2015. As a percent of total BSAI Pacific cod processed, the offshore sector's AI portion ranged from eight percent to 15 percent during 2003 through 2010, but since 2012, the percentage has declined ranging from 2 percent to 5 percent. Likely this recent decline can be attributed to reduced AI Pacific cod biomass and the Pacific cod TAC split.

Looking at the portion of AI Pacific cod processed by shoreplants, there are currently two shoreplants in the AI management area: Adak and Atka. Of these two plants, Adak is the primary plant for Pacific cod. Other shoreplants outside the AI management area have generally processed less than 1 percent of the total AI Pacific cod during 2003 through 2015. The percentage of total AI Pacific cod processed in AI shoreplants has ranged from zero percent in 2011 and 2015 to a high of 49 percent in 2013. As a percent of the total BSAI Pacific cod processed, the AI shoreplants processed between three percent and six percent during 2003 through 2009, but since 2010, AI shoreplants have processed significantly less ranging from zero percent to two percent. Some of the recent decline in processed AI Pacific cod by AI shoreplants is likely due to the reduction in AI Pacific cod biomass and the Pacific cod TAC split, but changes in fishing behavior by the offshore sector, starting in 2008, could also have contributed to the decline in processed AI Pacific cod.

In 2008, both Amendment 80 and Amendment 85 were implemented. Amendment 80 provided an allocation of the TACs for six groundfish species, including Pacific cod, to facilitate the development of cooperative arrangements among the eligible non-pelagic trawl CPs, thus allowing opportunities for

consolidation within the Amendment 80 sector and allowing for increased processing participation by the sector in non-rationalized fisheries like AI Pacific cod. Amendment 85 reduced the allocation of BSAI Pacific cod to trawl sectors from 47 percent to 37.8 percent. Amendment 85 also further apportioned the BSAI Pacific cod allocation amongst the different trawl sectors. Of the 37.8 percent BSAI Pacific cod allocated to the trawl sectors, Amendment 80 CPs are apportioned 13.4 percent, AFA CPs are apportioned 2.3 percent, and trawl CVs are apportioned 22.1 percent.

As a result of the implementation of Amendment 80 and Amendment 85 in 2008, the fishing behavior for the trawl sectors appears to have changed in the AI Pacific cod fishery. Information in Table 2-33 indicates that prior to 2008, a majority of the AI Pacific cod processed by the offshore sector came from CP harvest, but after 2008, CV deliveries of AI Pacific cod to CPs played a more significant role in the offshore processing. Prior to 2008, on average 69 percent of the total CV deliveries of AI Pacific cod went to shoreplants, while 31 percent was delivered to offshore vessels. Since 2008, 34 percent of total CV AI Pacific cod was delivered to shoreplants, and 66 percent was delivered to offshore vessels. The flexibility of the Amendment 80 program combined with the flexibility of other rationalization programs implemented prior to Amendment 80 likely afforded the offshore sector the ability to change their fishing behavior in the AI Pacific cod fishery to lessen the impacts of Amendment 85, a lower AI Pacific cod biomass, and the BSAI Pacific cod TAC split. When compared to the offshore sector, the AI shoreplants have little ability to change their behavior to reduce the impacts resulting from a lower AI Pacific cod biomass and the BSAI Pacific cod TAC split, since the AI shoreplants rely 100 percent on CV deliveries of AI Pacific cod to their plant. This disparity in flexibility between the offshore sector and AI shoreplants leaves the AI shoreplants at a significant disadvantage in adapting to changes in the AI Pacific cod fishery.

Alternative 2

Catcher Vessel Fishery

Under Alternative 2, only CVs would be eligible to fish the AI Pacific cod fishery and deliver to AI shoreplants until a selected date (options: March 1, March 7 or March 15), at which point the fishery would open to all vessels with available BSAI Pacific cod sector allocation and the appropriate endorsements on their license limitation program (LLP) licenses to fish in the AI Pacific cod fishery. The options described below provide additional thresholds that could serve to open the fishery to all vessels prior to the (March 1, 7, or 15) date. Given that the AI Pacific cod fishery would be reserved for CVs that deliver to AI shoreplants, and the trawl CV sector has been the most active in the AI Pacific cod fishery during 2003 through 2015, those amongst the trawl CV sector that are willing to delivery to AI shoreplants will likely be positively impacted from the exclusive CV fishery. As shown Table 2-33, an average of 29 trawl CVs have delivered 4,800 mt of AI Pacific cod to AI shoreplants from 2003 through 2015. Given the historical fishing patterns of the trawl CV sector, if the AI shoreplants are operational, those trawl CVs that do participate in the AI Pacific cod exclusive fishery would likely benefit from restricted access, while at the same time those vessels would likely provide sufficient catch capacity for the AI shoreplants.

The trawl CPs, the trawl CVs that deliver to the trawl CPs, and the hook-and-line CPs would likely be negatively impacted by the proposed action because they would be restricted from harvesting AI Pacific cod before the Council selected date of March 1, March 7 or March 15. Within the trawl CP sector, an average of 5 vessels have been active in the fishery during 2003 through 2015 and harvested 22 percent of the AI Pacific cod fishery during 2003 through 2015, with an average first wholesale gross value through 2014 of $7.5 million. Relative to the total first wholesale gross revenue from all fisheries for this group, the AI Pacific cod fishery contributed, on average, 4.7 percent. As for trawl CVs delivering to offshore

processors, on average 13 vessels delivered 5,000 mt of AI Pacific cod during 2003 through 2015. The hook-and-line CP sector harvested, on average, 16 percent of the AI Pacific cod during 2003 through 2015. The number of hook-and-line CPs averaged 6 vessels during this same period. The average first wholesale gross revenue from the AI Pacific cod fishery during 2003 through 2014 was $4.2 million, which was 3.1 percent of their total first wholesale gross revenue from all fisheries.

Offshore sectors ineligible to harvest AI Pacific cod during the designated time period in the A season would likely respond by fishing in the BS Pacific cod fishery, in an effort to offset the burden of the action, and minimize costs of the new restriction. However, whereas in earlier years there was a single Pacific cod TAC for the entire BSAI, since 2014 there have been separate Pacific cod TACs for the AI and for the BS. Because of this, if the BS TAC would otherwise have been fully harvested, a vessel shift from the AI to the BS can only take place at the expense of another vessel's ability to harvest Pacific cod in the BS within that sector allocation. Halibut PSC rates are another potential factor for ineligible vessels. From 2004 through 2012, estimated average PSC rates, per ton of CV groundfish catch were 0.0013 in the AI and 0.014 in the BS. As a result, halibut PSC limits could potentially prevent trawl CVs and CPs that historically participated in the AI Pacific cod fishery from catching their sector allocation in the BS. Finally, there could also be some disadvantages to these sectors from lower prices for BS Pacific cod, relative to AI Pacific cod, and some lost economies of scale for some CP vessels that operate in the AI Pacific cod fishery, since they also participate in other AI fisheries.

The CDQ AI Pacific cod allocation and the incidental catch allowance (ICA) reserved for incidental catch of AI Pacific cod in other groundfish fisheries, primarily to support the offshore sectors in the Atka mackerel fishery, are not affected by this action.

Shoreplant Delivery Requirement

Alternative 2 stipulates that prior to a Council-selected date in March, the AI Pacific cod harvested by CVs during the exclusive fishing period would be delivered to shoreplants, west of 170 degrees longitude. After the Council selected date, the exclusive fishing period would no longer be limited to CVs and the harvest of AI Pacific cod could be delivered to offshore processors and shoreplants east of 170 degrees longitude for the remainder of the year or be targeted by CPs.

Adak and Atka are currently the only AI communities with AI shoreplants; therefore, these are likely the primary communities that will benefit from a regionalized delivery requirement. For Adak, the proposed action would likely result in substantial community-level impacts in the form of increased economic activity from processing of AI Pacific cod, assuming the processing plant is operating. A delivery requirement would also likely increase CV port visits to Adak and, thus, increase demand for goods and services in the community. However, any increase in economic activity in Adak as a result of an increase in CV port visits would likely be offset by a decrease in economic activity in the Adak community from a reduction in CP port visits.

Atka, on the other hand, has not been an important logistical support base for the AI Pacific cod fishery and has not been impacted by the increased mothership activity in the AI Pacific cod fishery. Prior to 2012, Atka Pride Seafoods, the local shoreplant, did not have a Pacific cod processing line so they did not take deliveries of, or process, Pacific cod. Since 2012, the shoreplant has taken a very small amount of Pacific cod for processing, but plans to expand production in the very near future to include a Pacific cod processing line. Any increase in deliveries or processing of Pacific cod at the local shoreplant as a result of a delivery requirement would likely benefit the community through increased economic activity. Increased deliveries of, and processing of AI Pacific cod in the local shoreplant may lead to similar

changes in port visits by trawl and non-trawl CVs. However, increased port visits by CPs to Atka are not likely because the community lacks the infrastructure to support these vessels.

Implicit in the statement of increased economic activity for AI communities from an exclusive fishing period combined with a delivery requirement to AI shoreplants is the assumption that Pacific cod processing is economically viable at these shoreplant facilities. However, this assumption may not hold. Processing margins at the AI shoreplants may be smaller than elsewhere, given their remote location. In addition, the processing margins maybe insufficient to support two shoreplant processing facilities in the AI during periods of low AI Pacific cod TAC. As noted by representatives of the Adak shoreplant facility, the additional competition from offshore processing is cited as one of the reasons the Adak processing plant closed several times and why the facility is continuing to have difficulty maintaining a consistent operator. The proposed action could exchange competition from offshore processing for competition with the other AI shoreplant.

A delivery requirement of AI Pacific cod to AI shoreplants would negatively impact offshore processing vessels that have historically participated in the AI Pacific cod fishery. From 2003 through 2014, the average exvessel gross revenue for CVs delivering to offshore processors was $4.3 million, and the average first wholesale gross revenue for the CPs was $8.4 million (see Table 2-36). Relative to total revenue from all groundfish fisheries, the average first wholesale gross revenue for those trawl CPs participating in the AI Pacific cod during 2003 through 2014 was $205 million, and the average exvessel gross revenue for trawl CVs participating in the AI Pacific cod fishery during 2003 through 2014 was $95 million (see Table 2-34). The potential for these vessels to redeploy to the BS Pacific cod fishery would mitigate some of the lost economic activity from processing AI Pacific cod.

Because CVs would be required to deliver AI Pacific cod to shoreplants in the AI, CV participants would have less ability to use competition among processors for AI Pacific cod landings to leverage higher prices during price negotiations. One potential source of negotiating leverage would be the threat of harvesting the entire A season sector allocation in the BS. The extent to which a CV participant in the AI Pacific cod fishery could assert price negotiation leverage depends on the importance of the AI Pacific cod fishery to the CV participant and the AI shoreplants. However, the Adak plant would be extremely dependent on the CV deliveries for AI Pacific cod for the economic viability, since economies of scale for the shoreplant are thought to be critical.

Alternative 2 CV Fishing Period Dates

As part of the language in Alternative 2, the Council included options for three dates, March 1, March 7 or March 15, after which the AI Pacific cod exclusive fishing period for CVs and the delivery requirement to shoreplants in the AI management area would be removed each year. This element was included in Alternative 2 to prevent unharvested AI Pacific cod TAC and to allow CP sectors an opportunity to participate in the fishery.

The AI Pacific cod fishery for the trawl CV sector, historically the most active CV sector, usually starts in mid-February with a sharp increase in fishing and processing during the first two weeks in March, and continuing until the trawl CV sector A season allocation is depleted usually sometime during mid-to late March. The trawl CVs delivering to Adak shoreplant on average, from 2003 through 2015, harvested and delivered 37 percent (1,972 mt) of their total AI Pacific cod to the shoreplant (when operational) by March 1, 52 percent (3,127 mt) by March 7, and 73 percent (4,504 mt) by March 15. Given the historical amount of AI Pacific cod harvested and delivered to the Adak shoreplant during this period, the longer the CV exclusive fishing period and the delivery requirement remain in effect each year, the greater the

opportunity would be for the AI shoreplants to process a larger share of the non-CDQ AI Pacific cod TAC, which could provide increased economic stability for the communities of Adak and Atka.

As for the remaining sectors, removing the CV exclusive fishing period and delivery requirements early in the AI Pacific cod fishery could provide some earlier fishing opportunities for these sectors. Inhibiting the success of the offshore processing sectors from harvesting the remaining AI Pacific cod is the potential for offshore CPs and CVs to be participating in other groundfish fisheries in the AI or BS during this period, few of the offshore processors have secure a buyer for their processed AI Pacific cod, and the potential for deteriorating quality of AI Pacific cod harvested during the last few weeks in March. Despite these limitations, during years of high AI Pacific cod ITAC, the offshore processing sectors will likely have a greater opportunity to fish AI Pacific cod after the removal of the exclusive CV fishing period and AI shoreplant delivery requirement, while during years of low AI Pacific cod ITAC, there will likely be little opportunity for these sectors to participate in the AI Pacific cod fishery after the removal of the directed fishing restriction and AI shoreplant delivery requirement.

Options

To further prevent under harvesting the AI Pacific cod TAC due to insufficient AI shoreplant processing capacity, the Council included five additional options. The following is a summary of the effects of each of the additional options.

Option 1 would change the proposed Alternative 2 from a time specific AI Pacific cod fishery for CV sectors as noted in Alternative 2 to a set-aside of non-CDQ AI Pacific cod TAC to the CV sectors for deliver to AI shoreplants. Any amount of non-CDQ AI Pacific cod TAC greater than the amount allocated to the CV sectors would be available at the start of the fishing year to all sectors without an AI shoreplant delivery requirement.

The primary benefit of this option relative to the language proposed in Alternative 2 is that it would allow processing by both offshore and AI shoreplants when there is sufficient non-CDQ AI Pacific cod TAC available. This option provides both a reduction in the risk of diminished historical processing for the AI shoreplants while also allowing the offshore sector to plan and conduct processing operations during periods of high AI Pacific cod TAC, thereby reducing the risk of leaving AI Pacific cod TAC in the water.

From the perspective of the AI shoreplants, this option limits the amount of non-CDQ AI Pacific cod TAC that would be set-aside for CVs for delivery to AI shoreplants. The set-aside options are 3,000 mt, 5,000 mt, or 7,000 mt. Processing data shows that during 2003 through 2015, the AI shoreplants processed on average 4,732 mt of non-CDQ AI Pacific cod per year. During four of those 13 years, the amount of non-CDQ AI Pacific cod processed by the AI shoreplants exceeded the 7,000 mt, but three of the past 13 years the AI shoreplants processed less than 3,000 mt. Additionally, selecting a specific set-aside for AI shoreplants does not limit the AI shoreplants to just that set-aside if a portion of the non-CDQ AI Pacific cod was not set-aside and was available for harvest. After the AI shoreplants have processed the non-CDQ AI Pacific cod TAC set-aside, the shoreplants could continue to process any unharvested non-CDQ AI Pacific cod TAC that was not restricted to CVs for delivery to AI shoreplants.

Option 2 dictates that if less than 50 percent of the AI Pacific cod is harvested by a date certain February 28, March 7 or March 15, then the delivery requirement for that year is removed. Given the historical performance by the trawl CV sector and the CP sector in the AI Pacific cod fishery from 2003 through 2015, a February 28 performance measure could allow too short a duration for the trawl CV sector to harvest 50 percent of the non-CDQ AI Pacific cod TAC, while a March 15 performance measure would

leave only two weeks for the offshore sector to harvest the remaining non-CDQ AI Pacific cod TAC, which in years of high TAC could be too short a period to harvest any remaining non-CDQ AI Pacific cod TAC.

Option 3 states that if less than 1,000 mt of the AI Pacific cod set-aside has been landed by February 21 or February 28, the delivery requirement restriction for that year would be removed. The intent of this option relative to Option 2 is to provide a performance measure at an earlier date. Given the nature of the AI Pacific cod fishery in recent years and the offshore sector's difficulty in adjusting to unexpected open delivery of AI Pacific cod, in all likelihood the option to remove the delivery requirement if there is insufficient AI shoreplant processing capacity by February 21st would have better success at limiting unharvested non-CDQ AI Pacific cod TAC than February 28th.

Option 4 states that if prior to a Council-selected date (options: November 1 or December 15) each year, neither the City of Adak or City of Atka has notified NMFS of the intent to process Pacific cod in the upcoming season, the AI shoreplant delivery requirement would be suspended for the upcoming year. Cities could voluntarily provide notice prior the selected date if they do not intend to process Pacific cod.

The advantage of this option is the increased notification of the AI shoreplants not intending to process non-CDQ AI Pacific cod TAC in the upcoming fishery would allow for better timing relative to Options 2 or 3 to prepare the logistics of harvesting and processing non-CDQ AI Pacific cod TAC by the offshore processors and non-AI shoreplants. Of the two suggested dates for notice of intent, November 1 provides more time for the industry to make the necessary arrangements to harvest and process the non-CDQ AI Pacific cod if there are no AI shoreplants operating in the upcoming fishing year. In general, more notification concerning processing of AI Pacific cod in the upcoming fishing year will help to reduced stranding of non-CDQ AI Pacific cod TAC.

Option 4 could create a strong incentive for the cities of Adak and Atka to notify NMFS of the intent of a local processor to process Pacific cod in the upcoming season, yet later during the fishing season fail to process Pacific cod. In the past, NMFS's experience with similar options in other programs has shown that it difficult and problematic to determine intent. For example, even if a city might reasonably believe that they will have processing capacity, the delivery requirement will effectively preclude other participants from harvesting and processing during that time. This could lead to participants forgoing catch and stranded non-CDQ AI Pacific TAC. If this option is selected, similar to other programs, NMFS would simply document whether or not they received a letter indicating the intent of process cod, and if so, the restrictions for a regional delivery requirement would go into effect for the specified time period.

Option 5 states that any processor that has processed Pacific cod in the Aleutian Islands management area in at least 12 years between 2000 and 2014 shall be exempt from these restrictions for processing levels up to 2,000 mt. The 2,000 mt limit proposed in this option is similar to a sideboard in that it is a collective limit for all vessels that meet the exemption qualifications; it does not represent a guaranteed allocation.

Currently the language in Option 5 can be interpreted several ways, resulting in different numbers of qualifying vessels. First, it is unclear which type of CP operation would count towards a qualifying year. Second, the option can be interpreted to count both incidental cod and directed cod toward the threshold of 12 years of processing participation. Applying the most liberal interpretation of Option 5, for vessels acting as a CP and including both targeted and incidental AI Pacific cod, 10 CPs would qualify for the exemption. Narrowing the interpretation to CPs processing only targeted AI Pacific cod, 4 CPs would qualify for the exemption. Narrowing the focus to just CPs acting as motherships in the AI Pacific cod fishery, only on CP qualifies whether processing both incidental and targeted AI Pacific cod or just processing targeted AI Pacific cod.

If the Council's intent is to effectively mitigate lost economic activity from the AI Pacific cod fishery for CP vessels with long-term continuous processing activity in the AI Pacific cod, the option could be revised to either increase the exemption limit for AI Pacific cod or limit the exemption to those CP vessels acting as a mothership for AI Pacific cod during the qualifying period. A 2,000 mt processing limit for 10 exempt CPs with an average historical processing of over 9,000 mt of AI Pacific cod would only mitigate a small portion of the lost economic activity from these vessels. However, if the Council's intent is to mitigate lost economic activity from the AI Pacific cod fishery for qualified CP vessels with long-term mothership processing activity in the AI Pacific cod fishery, the 2,000 mt exemption limit would be more effective at mitigate some of this lost economic activity.

This option would necessarily reduce the amount of non-CDQ AI Pacific cod TAC delivered to AI shoreplants by up to 2,000 mt, which could reduce the economic activity generated from the processing of AI Pacific cod and therefore reduced the effectiveness of the proposed action to stabilize AI communities. The degree the exemption would impact AI shoreplants depends on how much of 2,000 mt AI Pacific cod exemption limit is processed by the exempt CPs. Coupled with a low non-CDQ AI Pacific cod TAC, the impacts to AI shoreplants from exempt qualified CPs processing a large portion of the 2,000 mt limit, could be significant. At a non-CDQ AI Pacific cod TAC of approximately 4,000 mt, there could be little or no non-CDQ AI Pacific cod TAC available for delivery to AI shoreplants because up to 2,000 mt would be reserved for an ICA, leaving only 2,000 mt for both AI shoreplants and exempt CPs, of which CPs could process the entire 2,000 mt. Short of a non-CDQ AI Pacific cod TAC of greater than 8,700 mt, there would likely be insufficient non-CDQ AI Pacific cod TAC for AI shoreplants to process even their average 2003 through 2015 of 4,732 mt. Based on the Council's stated intent of the proposed action to stabilize AI communities, the Council may want to revise Option 5 to only apply if non-CDQ AI Pacific cod TAC is greater than the amount set-aside from the trawl CV BSAI allocation plus additional 4,000 mt to account for an ICA and the CP exemption limit.

Finally, it is appears that the need for Option 5 may be somewhat mitigated by the selection of Option 1. The intent of Option 1 is to set-aside a specific amount of non-CDQ AI Pacific cod TAC for delivery to AI shoreplants, while any portion of the non-CDQ AI Pacific cod TAC that exceeds that amount could be harvested by any vessel and delivered to any processor, whether an offshore vessel or shoreplant. A set-aside for delivery to AI shoreplants that also includes up to 2,000 mt non-CDQ AI Pacific cod TAC exemption limit for CP exempt vessels under Option 5 appears to run counter to the Council's intent of providing stability for AI shoreplants and communities in which they reside. Since any portion of non-CDQ AI Pacific cod TAC that exceeds the AI shoreplant set-aside would be available to any sector for directed fishing and is not subject to the regional delivery requirement, exempt vessels Option 5 would be able to target and process this portion of the non-CDQ AI Pacific cod TAC.

Trawl CV Pacific Cod Harvest Limit for BS 'A' Season

To prevent the trawl CV sector from harvesting its entire BSAI A season Pacific cod allocation in the BS prior to completion of the AI Pacific cod fishery, the proposed action would limit the amount of A season trawl CV Pacific cod harvest in the BS prior to a date certain (option: March 1, March 15 or March 21). The A season BS Pacific cod harvest limitation for the trawl CV sector would be an amount equal to the BSAI aggregate trawl CV sector A season allocation, minus the lesser of the AI set-aside or (options: 3,000 mt, 5,000 mt, or 7,000 mt). The Pacific cod trawl CV sector has been placed on bycatch status prior to the end of the A season every year since 2004; and during seven of those 10 years, the fishery was placed on Pacific cod bycatch-only status before March 15. During 2012 season, the sector's Pacific cod fishery was placed on bycatch-only status on February 29, which is early enough that the AI Pacific cod fishery might have been preempted if there were separate BS and AI Pacific cod TACs.

On those occasions that the BS Pacific cod fishery is closed to directed fishing for trawl CVs to prevent preemption of the AI Pacific cod fishery, the effect of this limitation would be a shift in effort from the BS for trawl CV Pacific cod to the AI for trawl CV Pacific cod. On average, from 2012 through 2014, the number of trawl CVs fishing in the BS Pacific cod fishery during the month of March ranges from a low of 78 vessels to a high of 86 vessels. The distributional loss for trawl CVs operating in the BS would be less than or equal to the AI directed Pacific cod non-CDQ TAC or the Council selected option of 3,000 mt, 5,000 mt, or 7,000 mt, whichever is less. In 2012, the exvessel price of trawl caught BS Pacific cod was $0.314, which if applied to the BS catch limit of 3,000 mt, 5,000 mt, or 7,000 mt, suggests that the exvessel gross value of that BS catch limit, in 2012, would have been $2.1 million, $3.5 million, and $4.8 million. This exvessel value of the BS catch limit represents a redistribution of exvessel value from the BS trawl CV operators to the AI trawl CV operators.

Environmental Assessment

Target Groundfish Species

AI Pacific Cod

Effects of the action alternative on Pacific cod in the AI would be limited to changes in the location of harvest. Based on past fishing patterns of trawl CPs and trawl CVs operating in the AI, limiting the AI Pacific cod set-aside to CVs would result in reduced concentration of fishing in locations in Area 543, along the shelf north of Agattu Island, and greater concentration of catch by trawl CVs in areas near the ports of Adak and Atka. Atka North Cape is the most important area to this sector. Catcher vessels harvesting fish in this area deliver to Adak. The area southeast of the port of Adak also is important to these CVs. Despite these potential changes in harvest location, none of the alternatives are expected to impact Pacific cod stock status in the AI. The Pacific cod stock would not be overfished or experience overfishing, because the current harvest specifications process for setting TACs and managing harvests within the limits would continue. Any potential impacts on prey availability and habitat are not likely to affect the sustainability of the Pacific cod stock.

Marine Mammals

Incidental Take Effects

Effects of the action alternative on Pacific cod in the AI would be limited to changes in the location of harvest. Based on past fishing patterns of trawl CPs and trawl CVs operating in the AI, limiting the AI Pacific cod set-aside to CVs will result in reduced concentration of fishing in locations in Area 543 along the shelf north of Agattu Island and greater concentration of catch by trawl CVs in areas near the ports of Adak and Atka. This change in harvest location likely reduces the potential for incidental takes of marine mammals in fishing areas frequented by CPs and CVs delivering AI Pacific cod to motherships and increases the potential for incidental takes of marine mammals in fishing areas frequented by CVs delivering to shoreplants. Marine mammals are rarely taken incidental to AI Pacific cod fisheries. On average, from 2007 through 2011, less than one marine mammal per year was killed incidental to the AI Pacific cod fisheries. Due to the rare and seemingly random nature of these incidental takes, the best available data indicate that any changes in the spatial distribution of the AI Pacific cod fisheries, resulting from a set-aside of AI Pacific cod for CVs, are unlikely to change the rate of marine mammal interactions in the AI Pacific cod fishery. In other words, the proposed action alternative is not likely to result in a net change in marine mammal interactions relative to the status quo.

Harvest of Prey Species Effects

The AI Pacific cod fisheries were modified in 2014 (the BSAI ABC and TAC were split into separate BS and AI ABCs and TACs) and 2015 (implementation of revised Steller sea lion protection measures) to conserve Pacific cod stocks and the western DPS of Steller sea lions. These modifications further reduce potential adverse effects of the fisheries on marine mammal populations including Steller sea lions relative to any effects anticipated in the Groundfish PSEIS (NMFS 2004). The proposed action alternative would likely result in similar effects on prey species for other marine mammals as the status quo (see NMFS 2014b).

Disturbance Effects on Marine Mammals

Effects of the action alternative on Pacific cod in the AI would be limited to changes in the location of harvest. Based on past fishing patterns of trawl CPs and trawl CVs operating in the AI, limiting the AI Pacific cod set-aside to CVs will result in reduced concentration of fishing in locations in Area 543 along the shelf north of Agattu Island and greater concentration of catch by trawl CVs in areas near the ports of Adak and Atka. This change in harvest location likely reduces the potential for disturbance of marine mammals in fishing areas frequented by CPs and CVs delivering AI Pacific cod to motherships and increases the potential for incidental takes of marine mammals in fishing areas frequented by CVs delivering to shoreplants. The 2014 Aleutian Islands Groundfish Fishery Biological Opinion (NMFS 2014c) evaluated the protection measures that will be enacted on January 1 2015, and concluded that the groundfish fisheries were not likely to cause jeopardy to the Western distinct population segment (WDPS) of Steller sea lions, nor cause adverse modification to designated critical habitat. Because these protection measures will remain in place, the effects of the fisheries on disturbance of Steller sea lions are not likely to be significant.

1 Introduction

This document analyzes proposed management measures that would prioritized a portion of the Aleutian Islands (AI) Pacific cod for access by catcher vessels (CVs) and designate it be delivered to shoreplants in the AI, with some constraints on the amount and dates by which the provisions would be removed. To accommodate the AI Pacific cod fishery for trawl CVs, the proposed action would also limit harvest of the A season trawl CV sector's Bering Sea (BS) Pacific cod allocation, so as not to allow the sector to harvest its entire A season allocation in the BS prior to the start of the A season AI Pacific cod fishery.

This document is a Regulatory Impact Review/Environmental Assessment/Initial Regulatory Flexibility Analysis (RIR/EA/IRFA). An RIR/EA/IRFA provides assessments of the economic benefits and costs of the action alternatives, as well as their distribution (the RIR), the environmental impacts of an action and its reasonable alternatives (the EA), and the impacts of the action on directly regulated small entities (the IRFA). This RIR/EA/IRFA addresses the statutory requirements of the Magnuson Stevens Fishery Conservation and Management Act, the National Environmental Policy Act, Presidential Executive Order 12866, and the Regulatory Flexibility Act. An RIR/EA/IRFA is a standard document produced by the North Pacific Fishery Management Council (Council) and the National Marine Fisheries Service (NMFS) Alaska Region to provide the analytical background for informed decision-making.

2 Regulatory Impact Review

The preparation of an RIR is required under Presidential Executive Order (E.O.) 12866 (58 FR 51735: October 4, 1993). The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following Statement from the E.O.:

> *In deciding whether and how to regulate, agencies should assess all costs and benefits of available regulatory alternatives, including the alternative of not regulating. Costs and Benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nonetheless essential to consider. Further, in choosing among alternative regulatory approaches agencies should select those approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.*

E.O. 12866 requires that the Office of Management and Budget review proposed regulatory programs that are considered to be "significant." A "significant regulatory action" is one that is likely to:

- Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, local or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive Order.

2.1 Statutory Authority

Under the Magnuson-Stevens Fishery and Conservation Act (Magnuson-Stevens Act) (16 USC 1801, *et seq*.), the United States has exclusive fishery management authority over all marine fishery resources found within the exclusive economic zone (EEZ). The management of these marine resources is vested in the Secretary of Commerce (Secretary) and in the regional fishery management councils. In the Alaska Region, the Council has the responsibility for preparing fishery management plans (FMPs) and FMP amendments for the marine fisheries that require conservation and management, and for submitting its recommendations to the Secretary. Upon approval by the Secretary, NMFS is charged with carrying out the federal mandates of the Department of Commerce with regard to marine and anadromous fish.

The AI Pacific cod fishery in the EEZ off Alaska is managed under the FMP for Groundfish of the BSAI. The proposed action under consideration would amend this FMP and Federal regulations at 50 CFR 679. Actions taken to amend FMPs or implement other regulations governing these fisheries must meet the requirements of Federal law and regulations.

2.2 Purpose and Need for Action

Since April 2008, the Council has been evaluating the need for community protections in the AI due to the implementation of rationalization programs for various fisheries. This rationalization has resulted in

excess processing capacity that has been used in the AI Pacific cod fishery. The specific rationalization programs are American Fisheries Act (AFA), Bering Sea and Aleutian Islands (BSAI) crab rationalization, and BSAI Amendment 80. These programs provide benefits to processing vessels and afford opportunities for consolidation, thus, freeing some processing capacity to target and process the non-rationalized BSAI Pacific cod fishery.

In December 2013, the Council adopted separate TACs for the BS and AI populations of Pacific cod. This action was tied to concerns about the declining AI Pacific cod population. The 2014 BS Pacific cod TAC was set at 246,897 mt and the AI Pacific cod TAC was set at 6,997 mt. The TAC for the AI is significantly lower than what was anticipated several years ago, and it is not anticipated that TAC for AI Pacific cod will increase in the near-term. Affected by these changes in the AI Pacific cod fishery are two shoreplants in the AI, and the communities these shoreplants are located critically depend on those shoreplants. Primary amongst these shoreplants is the one located in Adak, which in the past received a vast majority of the AI cod landings from both the state and Federal AI Pacific cod fisheries (see Table 2-25 and Table 2-32). In the past, Pacific cod deliveries to the Adak shoreplant alone were in the 6,000 mt to 10,000 mt range. As the AI TAC is now set separately and is relatively low, the risk of processing vessels with excess processing capacity closing the AI Pacific cod fishery earlier and eroding the historical share of AI Pacific cod processed by the Adak shoreplant processor is very high.

Given the increased participation in the AI Pacific cod fishery by the rationalized sectors, the BSAI Pacific cod TAC split, and the new Steller sea lion protection measures implemented in 2015, the Council adopted a problem statement to initiate the proposed action at the February 2014 Council meeting. Consideration of this action to provide some stability to AI shoreplant operations and AI communities is consistent with the Council's objectives for this action.

In February 2015, the problem statement was modified to include the Council's concern of the continued risk of increased processing participation by rationalized sectors in the non-rationalized AI cod fishery, which was the original reason the Council began focusing on AI shoreplant processor stability in 2008. The problem statement was also modified in February 2015 to account for the impacts to the AI shoreplant processors and communities and the need for community protections as a result of the recent BS and AI Pacific cod total allowable catch split and relatively low Pacific cod stock abundance in the AI. The following is the adopted problem statement for this proposed action:

> *The American Fisheries Act, BSAI Crab Rationalization, and BSAI Amendment 80 management programs provided benefits to processing vessels that were intended to protect their investments in, and dependence on, the respective fishery resources. Each of these programs has also afforded participants opportunities for consolidation, allowing for increased participation in the non-rationalized BSAI Pacific cod fishery in the Aleutian Islands, thus increasing the risk that the historical share of BSAI cod of other industry participants and communities that depend on shoreplant processing in the region may be diminished. The BSAI Pacific cod TAC split and relatively low Pacific cod stock abundance in the Aleutian Islands further increase the need for community protections.*

2.3 History of this Action

In 2008, the Council initiated a discussion of a proposal to establish processing sideboards on processing vessels eligible under the AFA, BSAI crab rationalization program, and BSAI Amendment 80 program that receive deliveries of Pacific cod harvest in the Eastern and Central AI (Areas 541 and 542). In effect, catcher processors (CPs), floating processors, and motherships in the three catch share programs noted above would be limited in the amount of CV deliveries they could receive of Pacific cod harvested in

Area 541 and/or 542 on an annual basis, or prohibited from taking deliveries prior to a specific date. The impetus for that proposed action was to ensure that the historical share of Pacific cod delivered primarily to the Adak shoreplant would continue.

The Council reviewed two discussion papers, one at December 2008 meeting and the other at the February 2009 meeting. After reviewing the discussion papers, the Council requested that an initial review draft analysis be prepared for a future Council meeting, emphasizing the general need to ensure that it fully explores the ability to protect communities from the additional offshore processing capacity resulting from rationalization programs. The Council originally requested that initial review be scheduled for late 2009 in order to coincide with the review of the ongoing Biological Opinion (BiOp), which among other things, addressed the effects of the status quo BSAI Pacific cod fishery on Steller sea lions. As the BiOp was rescheduled for release in late 2010, the Council rescheduled review of the AI processing sideboard action in early 2011. A supplement to the initial review draft analysis was prepared for the February 2011 Council meeting, but was postponed and not reviewed in order to understand the effects of a BSAI TAC split and 2011 Steller sea lion protection measures on the AI Pacific cod fishery.

In April 2013, the Council, concerned with shoreplant processing protections in the context of the Steller sea lion environmental impact statement (EIS), received an updated discussion paper of the AI Pacific cod processing sideboard analysis. The paper also reviewed the implications of pending Science and Statistical Committee (SSC) action to set separate acceptable biological catch (ABC) in 2014, for BSAI Pacific cod. The discussion paper clarified that, while the ABC may be split between the BS and AI, it was appropriate to maintain the combined BSAI sector allocations as this approach provided the greatest flexibility for sectors and was the simplest for National Marine Fisheries Service (NMFS) to monitor, relative to alternatives considered previously. After reviewing the discussion paper, the Council tasked staff to prepare a revised discussion paper addressing a CV allocation of Area 541/542 Pacific cod with a regionalized delivery requirement to AI shoreplants. The Council requested the analysis explore the need for and impacts of measures to avoid leaving AI Pacific cod initial total allowable catch (ITAC) unharvested, such as allowing CV activity after a certain date or at higher ITAC levels. The Council alo requested historical catch and processing distribution information for the various sectors (by gear and operational type) in the AI management area, as well as a discussion of current processing capacity and activities at Adak and Atka shoreplants.

At the October 2013 meeting, the Council reviewed the discussion paper and, postponed further action on this issue until February 2014. The Council recognized that any proposed action on the AI Pacific cod fishery would be extremely difficult, given the uncertainty surrounding this fishery due to:

- Establishment of separate OFLs and ABCs for Pacific cod in the BS and AI for the 2014
- Proposed changes to the Steller sea lion protection measures in the AI Pacific cod fishery, and
- An Alaska Board of Fish proposal to increase the State water GHL Pacific cod fishery from 3 percent to 4.5 percent.

Since October 2013, all three of these issues have been clarified. The Council separated the OFLs and ABCs for Pacific cod in the BS and AI, NMFS implemented revised Steller sea lion protection measures in the AI Pacific cod fishery in 2015 (79 FR 70286, November 25, 2014), and the proposal to increase the State water GHL Pacific cod fishery from 3 percent to 4.5 percent was removed from consideration.

At its February 2014 meeting, the Council reviewed an updated discussion paper on a CV apportionment of AI Pacific cod (Area 541/542), with a regionalized delivery requirement to AI shoreplants. After reviewing the discussion paper and receiving recommendations from the Advisory Panel (AP) and

testimony from the public, the Council initiated this analysis. In October 2014, the Council added two new options to the proposed action and requested the document be brought back for initial review. In February 2015, the Council reviewed a revised initial review draft of the action alternative, and after reviewing the document, the Council released the analysis for public review, while also modifying the problem statement, the language of Alternative 2, and adding two new options, as described below.

2.4 Description of Alternatives

Alternative 1 is the no action alternative. Alternative 1 would not prioritize a portion the AI Pacific cod TAC for access by CV sectors for a specified time period, or require AI Pacific cod to be delivered to shoreplants west of 170 degrees longitude. Alternative 1 would also not restrict the trawl CV BS allocation for a period of time to facilitate an inshore AI Pacific cod fishery.

Alternative 2 would prioritize AI Pacific cod (TAC minus CDQ and ICA) for CVs and require delivery of the AI Pacific cod to shoreplants in the AI management area until (option: March 1, March 7, or March 15), at which point the fishery would open to all vessels with available BSAI Pacific cod sector allocation and the appropriate endorsements on their LLP licenses to fish in the AI Pacific cod fishery. The alternative would also limit the amount of A season BS Pacific cod that could be harvested by trawl CV sector prior to a Council selected date of March 1, March 15 or March 21.

The proposed alternative includes five options that are intended to limit unharvested non-CDQ AI Pacific cod TAC. The first option changes the approach used in Alternative 2 from a CV only fishery to a set-aside for CVs for delivery to AI shoreplants. Under that option, any portion of AI Pacific cod non-CDQ TAC over the CV set-aside would be made available to any sector for deliveries to any processor. The second option removes the delivery requirement to shoreplants west of 170 degrees longitude in the AI if less than 50 percent of the AI Pacific cod non-CDQ TAC has been landed by specific date, of which there are three options, February 28, March 7 or March 15. The third option would suspend the delivery requirement to AI shoreplants for the remainder of the year if less than 1,000 mt of AI Pacific cod of the non-CDQ TAC has been landed by February 21 or 28. The fourth option would suspend the delivery requirement to AI shoreplants for the year if prior to a specific date neither the city of Adak nor the city of Atka has notified NMFS of the intent of a local processor in the community to process Pacific cod in the upcoming season. Council included November 1 or December 15 as options for the specific date the communities must notify NFMS of the intent process Pacific cod. Cities can voluntarily provide notice prior to the selected date if they do not intend to process AI Pacific cod. Finally, the fifth option would exempt any processor from the delivery restrictions for processing levels up to 2,000 mt if the vessels have processed Pacific cod in the AI management area in at least 12 years between 2000 and 2014.

Alternative 1. No Action

Alternative 2. Prior to (**options:** March 1, 15, 21) the A season trawl CV Pacific cod harvest in the Bering Sea shall be limited to an amount equal to the BSAI aggregate CV trawl sector A season allocation minus the lessor of the AI directed Pacific cod non-CDQ TAC **or (options:** 3,000 mt, 5,000 mt, 7,000 mt). Directed fishing for AI Pacific cod is prohibited for all vessels except CVs delivering to shoreplants west of 170° longitude in the AI prior to **(options:** March 1,7, 15).

The following options are not mutually exclusive:

Option 1: Any amount of the AI Pacific cod non-CDQ TAC above the amount set-aside from the trawl CV BSAI allocation may be available to any sector for directed fishing and is not subject to the regional delivery requirement.

Option 2: If less than 50% of the AI Pacific cod non-CDQ TAC has been landed at the AI shoreplants[2] by (**options:** February 28, March 7, 15), the restriction on the delivery to other processors and the restriction on the trawl CV sector allocation shall be removed.

Option 3: If less than 1,000 mt of the AI Pacific cod non-CDQ TAC has been landed at the AI shoreplants[1] by (**options:** February 21, 28) the restriction on delivery to other processors and the restriction on the trawl CV sector allocation shall be suspended for the remainder of the year.

Option 4: If prior to (**options:** November 1, December 15), neither the City of Adak nor the City of Atka have notified NMFS of the intent to process Pacific cod in the upcoming year, the Aleutian Islands shoreplant[1] delivery requirement is suspended for the upcoming year. Cities can voluntarily provide notice prior to the selected date if they do not intend to process.

Option 5: Any processor that has processed cod in the Aleutian Islands management area in at least 12 years between 2000 and 2014 shall be exempt from these restrictions for processing levels up to 2,000 mt.

Shoreplant is defined as a processing facility physically located on land.

2.4.1 History of the alternatives and options

The following section is a description and a time-line of how the alternatives and options were developed since first proposed by the Council.

In **February 2014**, the Council provided two alternatives for analysis. Alternative 1 is the no action alternative, which reflects the status quo (i.e., no limitation on AI Pacific cod for CVs and no delivery requirement to AI shoreplants). Alternative 2 would prioritize non-CDQ AI Pacific cod (TAC minus Community Development Quota (CDQ) and incidental catch allowance (ICA)) for CVs and require delivery of AI Pacific cod to shoreplants in the AI management area tell (options: March 7 or March 15 of each year). The action alternative would also reserve an amount of harvest that the trawl CV sector can take from the BS in the A season, such that their entire A season allocation is not harvested only in the BS. The amount would be equal to the BSAI aggregate trawl CV sector A season allocation minus the lessor of the AI set-aside or a fixed amount of (options: 3,000 mt or 5,000 mt). Alternative 2 also included an option that would remove the delivery requirement to shoreplants west of 170 degrees longitude in the AI if less than 50 percent of the AI Pacific cod set-aside has been landed by specific date, of which there were two options, March 7 or March 15.

In **October 2014**, the Council added two new options to the proposed action that would reduce the potential for unharvested AI Pacific cod under the proposed action. The first of these new options would suspend the delivery requirement to AI shoreplants for the remainder of the year if less than 1,000 mt of AI Pacific cod prioritized for CVs has been landed by February 28. The second option would also suspend the delivery requirement to AI shoreplants for the year if prior to a specific date neither the community of Adak nor the community of Atka has notified NMFS of the intent of a local processor in the community to process Pacific cod in the upcoming season. Council included November 1 or January 20 options for the specific date the communities must notify NFMS of the intent process Pacific cod.

[2] To better reflect the Council's definition of shoreplant is a processing facility physically located on land, staff changed the wording in the option from shoreside, which could include stationary floating processors, to AI shoreplants, which would exclude stationary floating processors.

During the **February 2015** meeting, the Council made a number of changes to the proposed action. The Council modified Alternative 2 to clarify that the proposed action prohibits directed fishing for AI Pacific cod for all vessels except CVs delivering to shoreplants west of 170° longitude. In addition, the Council added the option for a 7,000 mt harvest limit for the BS A season trawl catcher vessel Pacific cod and the option of March 1 for removing both the BS A season trawl catcher vessel Pacific cod harvest limit and catcher vessel exclusive fishing period and delivery requirement within Alternative 2. The Council also modified the existing options to include additional dates for removing the exclusive fishing period for CVs and shoreplant delivery requirement if there is insufficient shoreplant processing in order to allow additional time for offshore processors to harvest AI Pacific cod. The Council also clarified that the city of Adak and city to Atka have to notify NMFS of the intent to process Pacific cod and January 20 date was modified to December 15.

The Council also added two new options for consideration. The new Option 1 would clarify that the amount of AI Pacific cod available for the CV exclusive fishing period is equal to the harvest limit for A season trawl catcher vessel BSAI allocation to be used in the AI, and any amount of AI Pacific cod TAC over that limit would be available to any sector for directed fishing and is not subject to the regional delivery requirement. The new Option 5 would provide an exemption from shoreplant delivery requirements up to 2,000 mt for offshore processors that have processed AI Pacific cod in at least 12 years between 2000 and 2014.

Finally, the Council requested staff explore with NMFS whether there is an approach that would allow community notification and application of the regional delivery requirement specific to the processing capacity of the community.

The Council's approach for this proposed action has several advantages compared to options the Council has considered in the past to address the problem.

- The proposed action would maintain the sector allocations implemented under Amendment 85, and each sector would have access to their entire cod allocation. This action would modify who can harvest AI Pacific cod, early in the fishing year.
- The proposed action would remove the AI trawl CV fishery from a race with the BS trawl CV fishery for a specified period, and addresses the increasing shift of effort early in the year, primarily by pollock CVs.[3]
- The proposed action would limit increased participation by surplus processing capacity from rationalized sectors, by creating a date-certain, before which offshore processing sectors cannot participate in the AI cod fishery.
- The proposed action also provides four options that are intended to mitigate unharvested AI Pacific cod TAC (Options 1 through 4). For example, in fishing years where half of the directed AI Pacific cod fishing allowance has not been delivered by a date-certain, the processing restrictions are removed.

2.5 Methodology for analysis of impacts

The evaluation of impacts in this analysis is designed to meet the requirement of E.O. 12866, which dictates that an RIR evaluate the costs and benefits of the alternatives, to include both quantifiable and qualitative considerations. Additionally, the analysis should provide information for decision makers "to

[3] This has been recognized as one of the primary issues with previous alternatives. Whereas the Council can provide a regulatory structure to allow for a catcher vessel fishery in the AI, as long as there were not separate area sector allocations, the Council could not prevent the trawl catcher vessel sector in the AI from using its entire A season Pacific cod allocation in the BS prior to the AI fishery even getting started. The proposed alternative in this action attempts to address that issue.

maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach." The costs and benefits of this action with respect to these attributes are described in the sections that follow, comparing the No Action Alternative 1 with the action alternatives. The analyst then provides a qualitative assessment of the net benefit to the Nation of each alternative, compared to no action.

This analysis was prepared using data from the NMFS catch accounting system, which are the best available data to estimate total catch in the groundfish fisheries off Alaska. Total catch estimates are generated from information provided through a variety of required industry reports of harvest and offshore discard, and data collected through an extensive fishery observer program. In 2003, NMFS changed the methodologies used to determine catch estimates from the NMFS blend database (1995 through 2002) to the catch accounting system (2003 through present). The catch accounting system was implemented to better meet the increasing information needs of fisheries scientists and managers. Currently, the catch accounting system relies on data derived from a mixture of production and observer reports as the basis of the total catch estimates. The 2003 modifications in catch estimation included providing more frequent data summaries at finer spatial and fleet resolution, and the increased use of observer data. Redesigned observer program data collections were implemented in 2008, and include recording sample-specific information in lieu of pooled information, increased use of systematic sampling over simple random and opportunistic sampling, and decreased reliance on observer computations. As a result of these modifications, NMFS is unable to recreate blend database estimates for total catch and retained catch after 2002. Therefore, NMFS is not able to reliably compare historical data from the blend database to the current catch accounting system.

2.6 Background

The Council motion clarifies that the action would affect Pacific cod harvested in the AI from the federally-managed and State parallel fisheries. The following section describes the management of the Pacific cod fishery in the BS and AI to include management of the Federal fishery, seasonal allowances, State-managed AI Pacific cod GHL fishery, and the AI pollock fishery. This information is included in the background section since the current management of the BS and the AI Pacific cod fishery will be crucial for interpreting the effects of the proposed alternatives options.

2.6.1 BSAI Pacific cod Management

Pacific cod (*Gadus macrocephalus*) is a transoceanic species, occurring at depths from shoreline to 500 meters. Pacific cod is distributed widely over the eastern Bering Sea, as well as in the AI. Prior to 2014, the BSAI Pacific cod ABC and TAC was managed as single stock throughout the BSAI management area.[4] At the December 2012 Council meeting, the SSC stated that it would recommend separate OFLs and ABCs for BS and AI Pacific cod for the 2014 and 2015 harvest specifications cycle based on the best available data at the time. The stock assessment for AI Pacific cod was evaluated at the September 2013 BSAI Groundfish Plan Team meeting and October 2013 Council meeting. The Council received a recommendation from the Groundfish Plan Team and SSC regarding the 2014 and 2015 stock assessments, to split the Pacific cod stock into an AI stock and a BS stock. This split was implemented in the 2014. Table 2-1 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.

[4] The regulations governing the Pacific cod TAC may be found in 50 CFR 679.20(a)(7)(i) and (ii) and the final 2013 and 2014 harvest specifications for groundfish of the BSAI (79 FR 12108 March 4, 2014).

Table 2-1 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						
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			N/A			
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 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 length overall – 8.4 percent
- AFA trawl CPs – 2.3 percent
- Hook-and-line and pot CVs less than 60 feet length overall – 2 percent
- Pot CPs – 1.5 percent
- Jig vessels – 1.4 percent
- Hook-and-line CVs greater than or equal 60 feet in length overall - 0.2 percent

CDQ allocations, and non-CDQ sector TAC allowances, are subject to seasonal apportionment each year. Apportionments differ by sectors. The allocation of TAC among the nine sectors, with seasonal apportionments, creates a large number of separate sectorial-seasonal allocations.

The Council did not revise sector allocations to account for the BS and AI Pacific cod split and, therefore, sector allocations currently in effect will continue to apply at the BSAI level. 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 the Steller sea lion protection measures.

In addition, the State of Alaska has managed a GHL fishery for Pacific cod in State waters in the AI subarea since 2006. State regulations provide for a GHL of 3 percent of the BSAI Pacific cod ABC. This amount is deducted from the AI ABC when calculating the AI TAC. See Section 2.6.3 for a more detailed explanation of the AI GHL fishery for Pacific cod. Starting in 2014, the State of Alaska has provided opportunity for a new Pacific cod GHL fishery in the BS subarea. State regulations provide for a GHL of 3 percent of the BSAI Pacific cod ABC, which is deducted from the BS ABC when calculating the BS TAC.

2.6.2 Seasonal Allowance

BSAI Pacific cod allocations are managed at the BSAI level. 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 percent–30 percent seasonal split, the seasonal allowances vary by gear type taking into account changes to the season dates from 2014 Steller sea lion protection measures (Table 2-2).

Table 2-2 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%)

One consequence of having seasonal allowances at the combined BSAI level and sector allocations at the combined level is the possibility the entire AI ITAC can be harvested in the A season. This was understood at the time of the BSAI ABCs/TACs were split. Table 2-3 provides the BSAI Pacific cod sector apportionment and BSAI Pacific cod seasonal allowance for the 2015 fishing year. What is apparent when comparing the AI ITAC provided in Table 2-1 for 2015 (8,414 mt) with the BSAI A season allowance for the trawl CV sector in Table 2-3 (36,426 mt), is that the entire AI ITAC can be harvested by the trawl CV sector during the A season.

Table 2-3 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

2.6.3 State AI GHL Fishery

The State-managed AI fishery was established by the Alaska Board of Fisheries in 2006, and comprises 3 percent of the Federal BSAI Pacific cod ABC. This fishery is managed by the State and has different sector requirements and seasons than the Federal Pacific cod fishery. The state-waters Pacific cod GHL is split 70:30 between the A and B seasons. Unharvested A season GHL may be rolled over to the B season; however, the total GHL available during the B season may not exceed 70 of the entire state-waters GHL. The state-waters season is closed when the GHL has been reached. Table 2-4 and

Table 2-5 summarize the state AI GHL fishery.

Table 2-4 AI Pacific cod A season GHL opening and closing dates by inside and outside 175° W long to 178° W long and authorized fishing gear

Area	Season	GHL Opens	GHL Closes	Gear
Inside*	A	GHL Opens January 1	A season GHL remains open until A season GHL reached or June 9	60' or less using trawl, pot, and jig and vessels 58' or less using longline gear
				March 15 - no trawl gear greater than 100', pot gear greater than 125', and mechanical jig and longline greater than 58'
Outside*	A	4 days after federal CV trawl closure	If there is state-water A season GHL by April 1 and federal CV trawl B season opens	60' or less using trawl, pot, and jig and vessels 58' or less using longline gear
		Noon March 15 if federal CV trawl fishery still open on noon March 14 and A season GHL remains		March 15 - No trawl gear greater than 100', pot gear greater than 125', and mechanical jig and longline greater than 58'
		If federal CV trawl B season closes and A season GHL remains	Remains open until A season GHL reached or June 9	

***Inside** is defined as 175° W long to 178° W long; **Outside** is defined as outside 175° W long to 178° W long

Table 2-5 AI Pacific cod B season GHL opening and closing dates and authorized fishing gear

Area*	Season	GHL Opens	GHL Closes	Gear
Inside and outside	B	June 10	September 1 if all B season GHL has been taken	From June 10 through July 31, a vessel cannot exceed 60'
				Beginning August 1, pot vessels cannot exceed 125' while vessel with other gear cannot exceed 60'
		If there is B season GHL when federal CV pot B season closes	Whenever B season GHL is all harvested or December 31	Pot vessels cannot exceed 125' while vessel with other gear cannot exceed 60'

***Inside** is defined as 175° W long to 178° W long; **Outside** is defined as outside 175° W long to 178° W long

While trawl, longline, pot, and jig gear are allowed at various times during the GHL fishery, overall, the majority of the GHL fishery has been harvested by vessels using trawl and pot gear. Table 2-6 provides vessel counts and harvest by AI state-waters Pacific cod GHL fishery from 2006 through 2014 for the A and B seasons.

The proportion of harvest and deliveries each processor type receives varies each year (see Table 2-7). During the 2006 through 2008 seasons, Adak shoreplant received between 18 percent and 59 percent of the A season GHL fishery, while the offshore sector and other shoreplants received between 31 percent and 66 percent of the GHL fishery. From 2009 through 2011, operation at the shoreplant processor in Adak was intermittent, resulting in few shoreplant deliveries and therefore a greater proportion of floating processor deliveries. From 2012 through 2014, the Adak shoreplant received between 60 percent and over 74 percent of the A season GHL fishery. The offshore sector data was either confidential due to the limited number of participating vessels or the sector did not harvest any of the A season AI Pacific cod GHL. Since 2007, CP activity has been by pot vessels, primarily in the B season. In 2007, the trawl vessels were limited to 100 feet overall length or less. This restriction prohibited the larger trawl vessels from participating.

Table 2-6 Aleutian Islands state-waters Pacific cod fishery guideline harvest level and harvest from 2006-2014

Year	Season	Season Dates		Season Length[a]	Initial GHL[b]	Harvest[b]	Number of	
		Opened	Closed				Vessels	Landings
2006	A season	15-March	24-March	9	8,981,540	8,502,781	26	68
	B season	10-June	1-Sep	83	3,849,232 [c]	*	5	*
	TOTAL			92	12,830,772	*	29 [d]	*
2007	A season	16-March	23-March	7	8,148,202	8,229,931	29	97
	B season	10-June	1-Sep	83	3,492,086 [e]	2,143,310	10	92
	B season	1-Oct	3-Dec	63		1,265,760	5	14
	TOTAL			153	11,640,288	11,639,001	41 [d]	203
2008	A season	10-March	18-March	8	8,148,202	7,477,507	30	116
	B season	10-June	9-July	29	3,492,086 [f]	4,241,692	18	77
	TOTAL			37	11,640,288	11,719,199	45 [d]	193
2009	A season	25-March	1-April	7	8,425,981	1,737,434	19	35
	A season	7-April	9-June	64		3,800,453	8	15
	B season	10-June	1-Sept	83	3,611,135 [f]	*	5	*
	TOTAL				12,037,116	*	27 [d]	*
2010	A season	16-March	4-June	80	8,055,608	7,959,514	16	84
	B season	10-June	1-Sep	83	3,452,404 [f]	*	2	*
	B season	15-Nov	31-Dec	46		*	2	*
	TOTAL				11,508,012	*	16 [d]	*
2011	A season	30-March	1-April	2	10,879,701	*	1	*
	A season	5-April	9-June	65		*	3	*
	B season	10-June	1-Sep	83	4,662,729 [f]	*	3	*
	B season	25-Oct	31-Dec	67		*	1	*
	TOTAL				15,542,430	595,289	6 [d]	19
2012	A season	1-Jan	9-June	161	14,537,132	11,462,339	21	201
	B season	10-June	1-Sep	83	6,230,200 [f]	*	7	*
	TOTAL				20,767,332	*	28 [d]	*
2013	A season	1-Jan	9-June	160	14,213,056	*	12	*
	B season	10-June	1-Sep	83	6,091,310 [f]	*	1	*
	TOTAL				20,304,366	10,563,646	13	151
2014	A season	1-Jan	9-June	160	12,504,712	*	8	*
	B season	10-June	*ONGOING*		5,359,162 [f]	0	0	0
	TOTAL				17,863,874	*	8	*

[a] In days.

[b] In whole pounds.

[c] ADF&G made 3.5 million pounds of the GHL available to National Marine Fisheries effective on September 1.

[d] Some vessels participated in both seasons.

[e] Initial B season GHL shown, actual B season GHL was reduced from A season overage.

[f] Initial B season GHL shown, actual GHL included rollover from pounds remaining from A season

Table 2-7 Retained target and incidental catch of AI Pacific cod GHL and percent of GHL by processing sector and season from 2006 through 2014

Year	Processing Sector	Pacific cod GHL Seasons						Total (mt)
		A			B			
		Count	Harvest (mt)	% of GHL	Count	Harvest (mt)	% of GHL	
2006	AI Shoreplants	1	742	18	1	183	11	926
	Offshore	9	2,702	66	5	63	4	2,765
	Total	**10**	**3,444**	**85**	**6**	**247**	**14**	**3,691**
2007	AI Shoreplants	1	2,180	59	1	406	26	2,586
	Offshore & other shoreplants	4	1,149	31	7	378	24	1,527
	Total	**5**	**3,329**	**90**	**8**	**784**	**49**	**4,113**
2008	AI Shoreplants	1	977	26	1	341	22	1,318
	Offshore & other shoreplants	5	1,992	54	6	1,003	63	2,996
	Total	**6**	**2,970**	**80**	**7**	**1,344**	**85**	**4,314**
2009	AI Shoreplants	1	351	9	0	0	0	351
	Offshore	4	1,537	40	4	171	10	1,708
	Total	**5**	**1,888**	**49**	**4**	**171**	**10**	**2,059**
2010	AI Shoreplants	1	30	1	0	0	0	30
	Offshore & other shoreplants	7	3,449	94	4	486	31	3,936
	Total	**8**	**3,480**	**95**	**4**	**486**	**31**	**3,966**
2011	AI Shoreplants	0	0	0	1	14	*	14
	Offshore	3	59	1	1	*	*	*
	Total	**3**	**59**	**1**	**2**	*****	*	*****
2012	AI Shoreplants	1	3,951	60	1	366	*	4,317
	Offshore	2	*	*	0	0	0	*
	Total	**3**	*****	*	**1**	**366**	*	*****
2013	AI Shoreplants	1	4,777	74	0	0	0	4,777
	Offshore	0	0	0	0	0	0	0
	Total	**1**	**4,777**	**74**	**0**	**0**	0	**4,778**
2014	AI Shoreplants	1	4,099	72	0	0	0	4,099
	Offshore	1	*	*	0	0	0	*
	Total	**2**	*****	*	**0**	**0**	0	*****

Source: AKFIN, March 24, 2015

Table orginates from AI_GHL(3-24) file

As noted in Table 2-8, the majority of the vessels participating in the AI Pacific cod GHL fishery are fixed gear vessels with most calling Alaska their homeport. All total, there were 71 vessels that have participated in the the AI Pacific cod GHL fishery since 2006. Of those 71 vessels, 22 participated only in the AI Pacific cod GHL fishery, while the remaing 49 vessels participated in both GHL fishery and Federal AI Pacific cod fishery. Of these 71 vessels, 27 were trawls vessels, while 44 were fixed gear vessels. Of the 27 trawl vessels, 11 were homeported in different Alaska communities, while the remaining 16 trawl vessels were homeported outside of Alaska. As for the 44 fixed gear vessels, 31 were homeported in Alaska communities, while the remaining 13 vessels were homeported outside of Alaska. Of the Alaska ports, Kodiak had the largest number of vessels that participated in the AI Pacific cod GHL fishery at nine fixed vessels and three trawl vessels. As for homeports outside Alaska, Seattle had the largest number of AI Pacific cod GHL vessels at 10 trawl vessels and 10 fixed gear vessels.

Table 2-8 Number of vessels that participated in the AI Pacific cod GHL from 2006 through 2014 by gear and homeport

Homeport	Vessel count in the GHL AI Pacific cod fishery 2006 through 2013		
	Trawl gear	Fixed gear	Total
Adak	0	7	7
Bellingham	2	0	2
Cordova	0	1	1
Dutch Harbor	1	3	4
False Pass	0	1	1
Homer	0	3	3
Juneau	2	2	4
King Salmon	0	1	1
Kodiak	3	9	12
Mount Vernon	0	1	1
Newport	2	0	2
Pelican	0	1	1
Petersburg	2	0	2
Port Lions	0	1	1
Portland	2	0	2
San Francisco	0	2	2
Sand Point	2	0	2
Seattle	10	10	20
Seward	0	1	1
Sitka	0	1	1
Unalaska	1	0	1
Total	27	44	71

Source: AKFIN, December 2014

Table orginates from BSAI_PCOD_GHL_HOMEPORT(12-17)

Table 2-9 provides catch of AI Pacific cod from the GHL fishery from 2006 through 2014 by homeport. In cases where there were less than 3 vessels reported in each community, information on catch was not reported due to confidental data restrictions. As noted in the table, Seattle vessels harvested the largest portion of GHL catch at over 4,000 mt for both trawl gear and fix gear vessels. The Alaska homeport with the largest portion of the AI Pacific cod GHL fishery was Dutch Harbor at over 3,000 mt for fixed gear vessels.

Table 2-9 Catch of GHL AI Pacific cod from 2006 through 2014 by gear and homeport

Homeport *	Catch of GHL AI Pacific cod (mt)	
	Trawl gear	Fixed gear
Seattle	4,254	4,442
Kodiak	540	958
Adak	0	226
Other Alaska	2,969	8,677
Other non-Alaska	1,964	860

Source: AKFIN, December 2014

Table orginates from BSAI_PCOD_GHL_HOMEPORT(12-17)

* Homeports with less than 3 observations where aggregated into other Alaska and non-Alaska categories

** Denotes confidential information

To help provide insight on the level of participation in the Federal AI Pacific cod fishery from vessels that participate in the AI Pacific cod GHL fishery, Table 2-10 includes Federal AI Pacific cod catch and percent of the total AI Pacific cod catch from both GHL and Federal AI Pacific cod fisheries by homeport. As seen in the table, Seattle, with its 20 vessels, caught over 8,000 mt of GHL AI Pacific cod during the 2006 through 2014 period, which was approximately 18 percent of their total AI Pacific cod from the GHL fishery. The 12 vessels that call Kodiak homeport caught nearly 1,500 mt of the GHL AI Pacific cod, which is 47 percent of their total catch of AI Pacific cod from the GHL fishery.

Table 2-10 Vessel count, catch from GHL AI Pacific cod and federal AI Pacific cod fisheries and percent of each fishery by homeport from 2006 through 2014

Homeport*	Vessel count in the GHL AI Pacific cod fishery	Catch from GHL AI Pacific cod fishery (mt)	Catch from both GHL and federal AI Pacific cod fisheries (mt)	Percent of all AI Pacific cod catch from GHL fishery	Percent of all AI Pacific cod catch from federal fishery
Seattle	20	8,696	47,018	18%	82%
Dutch Habor	4	3,292	9,531	35%	65%
Kodiak	12	1,498	3,406	47%	53%
Juneau	4	666	2,695	25%	75%
Adak	7	226	400	56%	44%
Other Alaska	15	7,641	8,749	87%	13%
Other non-Alaska	9	2,823	2,961	95%	5%
Total	**71**	**25,026**	**74,811**	**33%**	**67%**

Source: AKFIN, December 2014

Table orginates from AI_PCOD_HOMEPORT(12-29)

* Homeports with less than 3 observations where aggregated into other Alaska and non-Alaska categories

2.6.4 AI Pollock Management

The AI pollock chapter in the 2012 annual Stock Assessment and Fishery Evaluation (SAFE) report described the early years of the AI pollock fishery:

> The nature of the pollock fishery in the AI region has varied considerably since 1977 due to changes in the fleet makeup and in regulations. During the late 1970s through the 1980s the fishing fleet was primarily foreign and joint venture (JV) where US catcher vessels delivered to foreign motherships. The last JV delivery was conducted in 1989 when the domestic fleet began operating in earnest. The distribution of observed catch differed between the foreign and JV fishery (1977-1989) and the domestic fishery (1989-2009…). The JV and foreign fishery operated in the deep basin area extending westward to Bowers Ridge and in the eastern most portions of the AI. Some operations took place out to the west but observer coverage was limited. In the early domestic period (1991-1998) the fishery was more dispersed along the AI chain with no observed catches along Bowers Ridge and fewer operations in the deep basin area. The majority of catch in the beginning of the domestic fishery came from the eastern areas along the 170° W longitude line, and around Seguam Island in both Seguam and Amukta passes. As the fishery progressed more pollock were removed from the north side of Atka Island around 174° W and later near 177° W northwest of Adak Island inside Bobrof Island. While the overall catch level was relatively low, the domestic fishery moved far to the west near Buldir Island in 1998…. In 1999 the North Pacific Fishery Management Council closed the Aleutian Islands region to directed pollock fishing due to concerns for Steller sea lion recovery. (Barbeaux, Ianelli, & Palsson, 2012: 160-161)

In 2005, the directed fishery was reopened, and the set-aside was allocated to the Aleut Corporation, pursuant to the requirements of The Consolidated Appropriations Act of 2004 (Public Law 108–199). Through this allocation, the act sought to promote the economic development of Adak, Alaska. The law required the Aleut Corporation to select participants in the Aleutian Islands directed pollock fishery and limited participation to American Fisheries Act (AFA) qualified entities and vessels 60 feet (18.3 m) or less in LOA. The law restricted the annual harvest of pollock in the Aleutian Islands directed pollock fishery by vessels 60 feet (18.3 m) LOA or less to less than 25 percent of the annual allocation

until 2009, and to less than 50 percent of the annual allocation prior to 2013. These vessels were to receive 50 percent of the annual directed pollock fishery allocation starting in 2013 and beyond (70 FR 9856, March 1, 2005).

The Council incorporated this legal requirement into its management regime when it adopted Amendment 82 to the BSAI groundfish FMP in June 2004, revising the FMP to establish the management framework for the Aleutian Islands directed pollock fishery. Regulations governing the harvest specifications require that, when the Aleutian Islands pollock ABC is less than 19,000 mt, the annual TAC is not greater than the ABC; when the ABC is greater than 19,000 mt, the TAC is equal to 19,000 mt. The CDQ allowance is 10 percent of the TAC. In addition, the Regional Administrator determines the amount of pollock required for an ICA. Both the CDQ allocation and the ICA are deducted from the TAC, and the balance of the TAC is allocated to the Aleut Corporation as an annual pollock directed fishery allowance (DFA) [50 CFR 679.20(a)(5)(iii)].

This directed fishery allocation is subject to seasonal apportionment. No more than either (a) the annual initial TAC plus any A season CDQ pollock set-aside, or (b) 40 percent of the Aleutian Islands pollock ABC, may be taken in the A season. The total A season apportionment, including the CDQ directed fishery seasonal allowance, the ICA, and the Aleutian Islands directed fishery seasonal allowance, cannot exceed 40 percent of the ABC. The B season apportionment equals the initial TAC minus the A season directed pollock apportionment and the A season ICA. Regulations provide for rollover of unfished apportionments from the A season to the B season, if the Regional Administrator determines that sufficient B season capacity exists [§ 679.20(a)(5)(iii)]. The seasonal apportionment is important because the pollock are likely to be more valuable during the A season roe fishery than they will be during the B season. This may affect the incentive of the Aleut Corporation to harvest its B season allocation.

While the Aleut Corporation's DFA is determined in part by regulations, other parts depend on policy decisions that may change from one year to another: (1) ICA could vary depending on the tendency of other fisheries to take incidental catches of pollock; (2) if the ABC is less than 19,000 mt, the Council could set a TAC that was smaller than the ABC; (3) the Council has discretion over the seasonal allocation of the CDQ and ICA; (4) the Aleut Corporation has discretion over its seasonal allocation of AFA, and small catcher vessel, shares.

The Regional Administrator may reallocate the Aleutian Islands pollock fishery allocation to the Bering Sea directed fisheries or CDQ pollock fisheries, once it is determined that vessels in either the Aleutian Islands directed fisheries or CDQ directed fisheries will be unable to harvest their entire allocation in the Aleutian Islands. This is to be done as soon as "practicable" and may be based on "projected" unharvested allocations (§ 679.20(a)(5)(iii)). In practice, on notification by the Aleut Corporation and CDQ groups that they will not harvest their allocations of the Aleutian Islands pollock TAC, NMFS reallocates the projected unused amounts to the Bering Sea directed fishery allocations, if the Bering Sea pollock TAC is less than the ABC. This occurred in 2005, 2006, 2011, and 2012. In 2007–2010, NMFS was unable to reallocate unused amounts of the Aleutian Islands pollock TAC because the Bering Sea pollock TAC was set equal to the Bering Sea ABC. Reallocation typically occurs in January (personal communications, AKRO NMFS staff).

The Aleut Corporation may choose the vessels allowed to harvest its DFA, and may direct them how to harvest it. Regulations do impose some limits on the Aleut Corporation's scope to organize the fishery as it chooses: in 2013 and beyond, 50 percent of the Aleutian Islands directed pollock fishery allocation will be allocated to vessels 60 feet LOA, or less. (§ 679.20(a)(5)(iii)) Vessels greater than 60 feet LOA used in this fishery to fish or to process fish, must be AFA vessels (§ 679.7(l)).

Since allocation of AI pollock to the Aleut Cooperation, there has been limited success in capitalizing on the allocation due to Steller sea lion protection measures closing many of AI pollock fishing grounds. The Aleut Corporation authorized vessels to fish for Aleutian Islands pollock in each year of the six years from 2005 through 2010. The Aleut Corporation did not authorize vessels in 2011 and 2012. Most vessels in most years were AFA trawlers over 100 feet LOA. The only year in which trawlers 60 feet LOA or less were authorized was in 2007 when seven small trawlers were authorized. The number of AFA trawlers authorized ranged from one in 2010 to 32 in 2005. Adak Fisheries LLC was an authorized shoreplant processor every year except 2010. Two other processors, Westward Seafoods and Unisea, both in Dutch Harbor, and the mothership *Excellence*, were also authorized in 2005. The AFA catcher/processor, *Katie Ann*, was authorized for three years.

2.6.5 Steller Sea Lion EIS

Since 2002, the AI Pacific cod fisheries have been managed to limit and disperse harvest in important Steller sea lion foraging areas. Steller sea lion populations in the AI began declining in the 1980s. The cause of the decline is unknown, though competition with fisheries for prey was advanced as a working hypothesis for the decline. In 1990, Steller sea lions were listed as threatened under the Endangered Species Act (55 FR 49204). In 1997, the population west of 144°W longitude (the western DPS) was reclassified as endangered (62 FR 30772). NMFS began restricting fishing with trawl gear near sea lion rookeries in 1992. Further fishing restrictions were implemented in the BSAI Atka mackerel and pollock fisheries in 1999 to reduce potential competition with sea lions. Season limits to reduce potential competition with sea lions were first imposed in the BSAI Pacific cod fisheries in 2001 (66 FR 7276). In 2002, NMFS implemented area closures for Pacific cod fishing in the BSAI to reduce potential competition with sea lions (67 FR 956).

The decline of the western DPS of Steller sea lions began to subside around 2000, though populations west of Samalga Pass in the AI have continued to decline at a steep rate. NMFS increased the area closures for Pacific cod and Atka mackerel fishing in the AI in 2011 to ensure the fisheries were not likely to jeopardize the continued existence of the western DPS or adversely modify designated critical habitat (75 FR 77535, corrected 75 FR 81921). In 2012, the U.S. District Court of Alaska ordered NMFS to prepare an EIS on the 2011 Steller sea lion protection measures citing NMFS's failure to provide sufficient information for informed public comment and failure to provide for adequate public participation when it prepared the environmental assessment for this action in 2010. The Court ordered the completion of the final EIS by March 2, 2014. The Court also ordered that any subsequent rulemaking for the BSAI groundfish fisheries as a result of the EIS be completed by January 1, 2015.

NMFS released the final EIS in May, 2014 (NMFS, 2014) with a court-approved extension. The EIS analyzed six alternatives – the status quo alternative (the 2011 sea lion protection measures), four action alternatives developed by Council's Steller Sea Lion Mitigation Committee and recommended by the Council, and a protective alternative that were developed by NMFS. These alternatives are described in detail in Chapter 2 of the May 2014 EIS (NMFS, 2014).

In April 2013, the Council recommended Alternative 5 as the preliminary preferred alternative for the public's consideration during the review and comment period on the draft EIS and for analysis in an ESA Section 7 consultation. The features of Alternative 5 specific to Pacific cod and pollock are as follows:
Pacific cod

- Establish seasonal apportionments based on the BSAI-wide TAC, as required under Amendment 85

- Set the seasons as follows:
    - Non-trawl gear:
        - Hook and line:
            - A season: 1/1—6/10
            - B season: 6/10—12/31
        - Pot:
            - A season: 1/1—6/10
            - B season:9/1—12/31
        - Jig
            - A season: 1/1—4/30
            - B season: 4/30—8/31
            - C season: 8/31—12/31
    - Trawl CVs and AFA CPs:
        - A season: 1/20—4/1
        - B season: 4/1—6/10
        - C season: 6/10-11/1
    - CDQ trawl and Amendment 80
        - A season: 1/20—4/1
        - B season: 4/1—6/10
        - C season: 6/10—12/31

Area 543

- Remove the area-wide retention prohibition
- Establish a catch limit for Pacific cod based on abundance in Area 543 as determined by the annual stock assessment process.
- Prohibit directed fishing for Pacific cod in waters 0—3 nm of haulouts and 0—10 nm of rookeries by trawl gear vessels (Figure 1).
- Prohibit directed fishing for Pacific cod in waters 0—3 nm from haulouts and 0—10 nm Buldir Island for hook-and-line and pot vessels (Figure 2).

Area 542

- Prohibit directed fishing for Pacific cod with trawl gear in waters 0-3 nm from haulouts and 0-10 nm from rookeries (Figure 1).
- Prohibit directed fishing for Pacific cod with hook-and-line and pot in waters 0-3 nm from rookeries (Figure 2).

Area 541

- Prohibit directed fishing for Pacific cod in the Seguam foraging area with hook-and-line, pot, jig, and trawl gears (Figure 2 and Figure 1).
- Prohibit directed fishing for Pacific cod with trawl gear in waters 0-3 nm from haulouts and 0-10 nm from rookeries, except prohibit directed fishing for Pacific cod with trawl gear in waters 0-20 nm from Agligadak (Figure 1).
- Prohibit directed fishing for Pacific cod with hook-and-line and pot gear in waters 0-3 nm from rookeries west of 172.59° W longitude and in critical habitat east of 172.59° W long (Figure 2).

<u>Pollock</u>

- Limit catch in the A season to 40 percent of ABC
- A season: 1/20-6/10
- B season: 6/10-11/1

Area 543

- Prohibit directed fishing for pollock in critical habitat except open a portion of Steller sea lion critical habitat outside 3 nm from Shemya, Alaid, and Chirikof haulouts and 20 nm outside 20 nm of rookeries.
- A season catch limit is 5% of ABC.

Area 542

- Prohibit directed fishing in waters 0-20 nm from rookeries and haulouts west of 178° West long except open a portion of critical habitat at Rat Islands Area outside 3 nm from Tanadak, Sefula, and Krysi Point, and 10 nm from Little Sitkin and Ayugudak.
- Prohibit directed fishing in waters 0-10 nm from rookeries and 0-3 nm from rookeries east of 178° West long. Except open portions of critical habitat outside 3 nm from Kanaga and Bobrof Island.
- A season catch limit is 15% of ABC.

Area 541

- Prohibit directed fishing for pollock in critical habitat to 0-10 nm from rookeries and 0-3 nm from haulouts and in the Seguam Foraging Area.
- A season catch limit 30% of ABC.

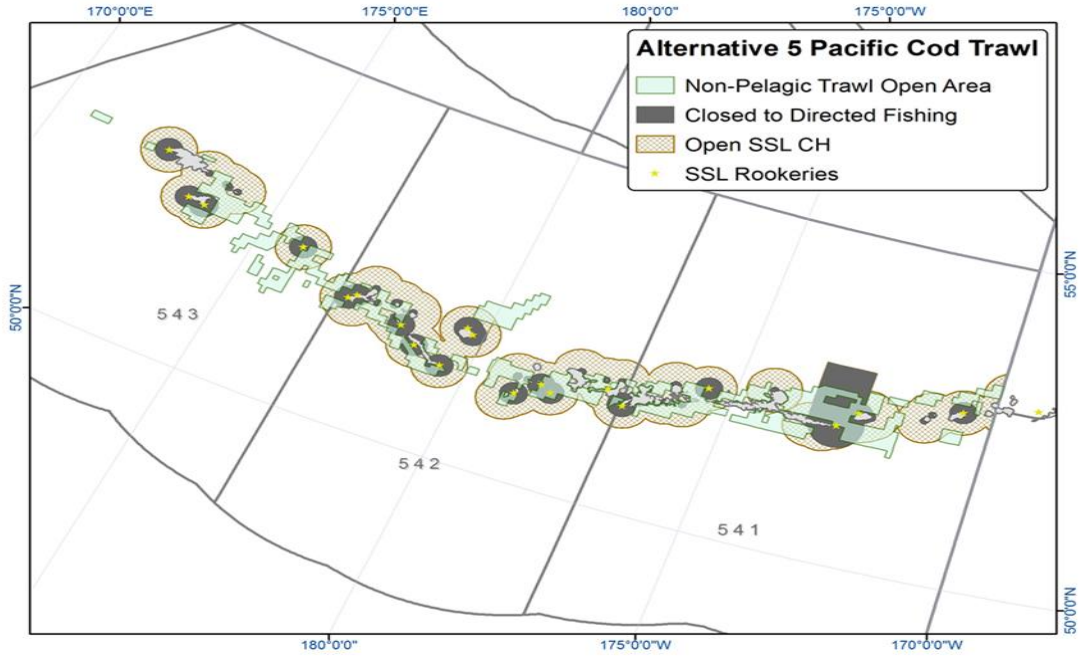


Figure 1 Pacific cod trawl closures under Alternative 5

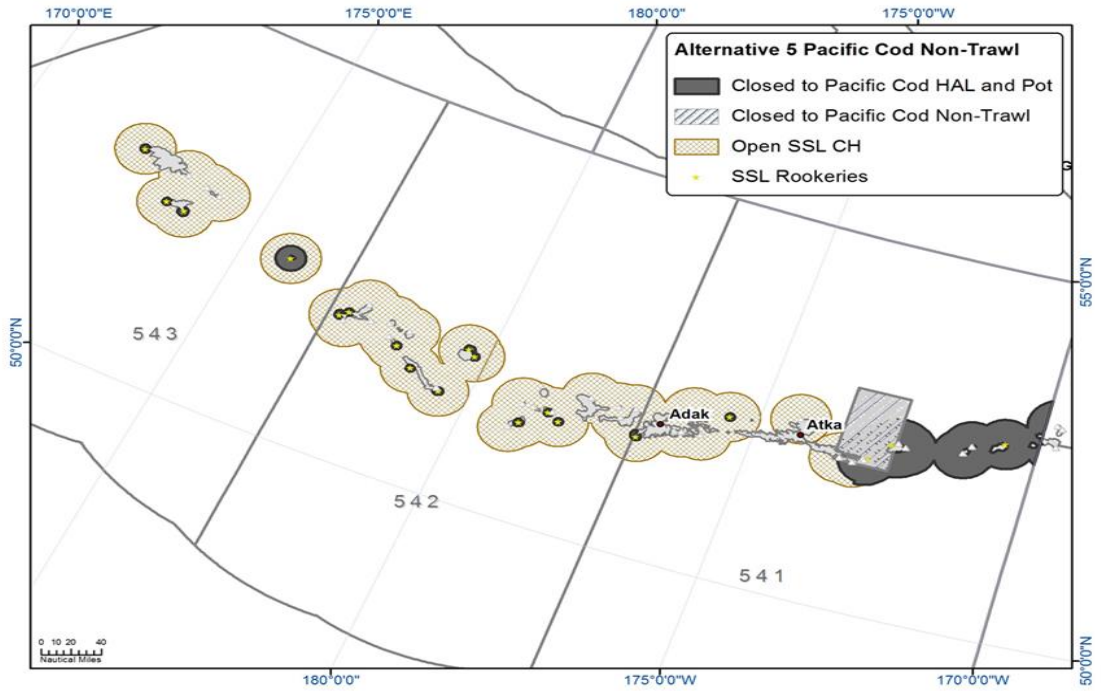


Figure 2 Pacific cod non-trawl closures under Alternative 5

The Council considered recommendations from its Steller Sea Lion Mitigation Committee, SSC, AP, and public testimony in developing their recommended preliminary preferred alternative (PPA) for the draft EIS. The Steller sea lion PPA is built from management measures for the four fisheries analyzed under the other alternatives and includes area catch limits for pollock fishery.

In October 2013, after review of the draft EIS, draft Comment Analysis Report, and consideration of public testimony, the Council recommended Alternative 5 as the preferred alternative. The Council selected Alternative 5 based on the understanding that the results of the Center for Independent Experts and State of Alaska and Washington reviews of the FMP BiOp indicate that Alternative 5 is not likely to result in jeopardy of continued existence of Steller sea lions or adverse modification or destruction of their designated critical habitat.

In April 2014, NMFS completed the 2014 BiOp on Alternative 5 and found that these protection measures insure the fisheries are not likely to jeopardize the continued existence or adversely modify or destroy critical habitat for the Western distinct population segment (WDPS) of Steller sea lions. Based on this ESA determination, Alternative 5 is also NMFS's preferred alternative. On November 25, 2014, NOAA Fisheries published the final rule to implement Steller sea lion protection measures for fisheries in the AI, effective December 26, 2014.

The following is a brief summary of the effects of the new management measures that were included in May 2014 Final EIS for Steller sea lion protection measures.

For trawl CPs and CVs, the average annual gross revenues would likely increase, while the extended C-season end date for Amendment 80 trawl vessels and those fishing Pacific cod CDQ, from November 1 to December 31 would help address potential regulatory discards after November 1. This change in closing dates may affect reallocation of Pacific cod later in the year, if a trawl CV fishery becomes viable at that time.

For non-trawl CPs and CVs, the change in average gross revenues between status quo and preferred alternative are not enough to make it possible to discriminate between alternatives. The non-trawl CP fleet is currently prohibited from directed fishing for Pacific cod in the Aleutian Island after November 1, but the preferred alternative would relax this November 1 season end date and allow directed fishing until the end of the year. The freezer-longline portion of this sector operates under a voluntary cooperative and directed fishing for Pacific cod in the BSAI last all year. The relaxation of this season end date would allow some of this fishing to occur after November 1 in the Aleutian Islands. However, during periods of low AI TAC, this season date extension is unlikely to be an advantage for the sector. It is also unlikely to be of advantage to the pot portion of this sector, as these vessels typically close directed fishing prior to November 1. For CVs, the extension of the fishing season until the end of the year would have little impact on this group of vessels, which typically does not operate in the AI in the late fall.

From a community perspective, Adak is the community likely to be most impacted by the preferred alternative. Atka, the only other AI community, is not as involved with the Pacific cod fishery, so the impacts from the preferred alternative are likely more long term as Atka completes its ongoing infrastructure improvements, which will facilitate increased participation in the Pacific cod fishery. The preferred alternative will likely be associated with more port visits to Adak, and associated sales of goods and services relative to the current Steller sea lion protection measures.

The following is a brief summary of the effects of the Council selected preferred alternative specific to the AI pollock fishery that was provided in the May 2014 Final EIS for Steller sea lion protection measures.

From the prospective of the AFA trawlers, fifty percent of the Aleut Corporation's allocation is set-aside for AFA trawl CPs and CVs (§ 679.7(1)(1)(iii) and § 679.20(a)(5)(iii)). To the extent that the Aleut Corporation is seeking to maximize its profits from its allocation, in order to use the funds for the development of Adak, AFA vessel owners will have to bid for, or compensate the Aleut Corporation for the use of the Aleut Corporation's allocation. If the Aleut Corporation tries to balance profit maximization with direct Adak development activity, AFA vessel owners may have to incorporation port visits and port-related activity into regional activity. Contracts made with the Aleut Corporation incorporating port requirements likely also would involve smaller royalty payments than otherwise, depending upon the relative negotiating success of the parties.

As for impacts to trawlers less than or equal to 60 feet LOA, fifty percent of the Aleut Corporation allocation is provided for these vessels. The increased access to the pollock grounds in the AI, as result of the action, may provide a new fishing opportunity for owners and operators of small trawlers. Depending on Aleut Corporation policies with respect to Adak development, fishing operations may pay royalties for the use of the Aleut Corporation allocation, may make commitments to delivery or buy supplies at the Port of Adak, or some combination of these. Since no vessel operator would voluntarily make these payments, unless it expected to enjoy a net benefit, the preferred action should benefit operators of small trawlers.

Increases in Aleut Corporation pollock harvests in the AI could benefit people who live in Adak in three ways: (1) revenues from the program could be used for investment in Adak infrastructure; (2) contracts with fishermen could require Adak deliveries of pollock, Adak port visits, or purchases (perhaps fuel) at Adak; (3) tax revenues from fisheries or sales taxes. These alternatives could provide benefits to people in Adak if they created new business opportunities and jobs. Jobs filled by persons from outside of Adak would not benefit Adak residents to the same extent as jobs they fill themselves, but may do so indirectly.

While the preferred alternative would tend to benefit people who live in Adak, the size and nature of the benefit cannot be predicted, because of (a) the uncertainty about future pollock harvest under the relaxed Steller sea lion restrictions, (b) the uncertainty about how the policy decisions the Aleut Corporation would make with respect to its use of the allocation, and (c) uncertainty about the regional economic impact pathways associated with increased fishing activity.

2.6.6 Affected Sectors

The Council motion identifies processing and harvesting sectors that would potentially be directly affected by the proposed action. A brief description of each of the processing sectors and harvesting sectors are provided below. The data used in this section of the background is retained harvests from 2003 through July 2015 and the source of the data is NMFS Catch Accounting System. For further description on the sectors, "Fishing Fleet Profiles", prepared by the Council, provides descriptions of the different sectors noted in this section that participate in the Bering Sea and Aleutian Islands fisheries (NPFMC 2012).

2.6.6.1 Trawl CPs

This sector includes AFA vessels and Amendment 80 vessels. The AFA specifically lists 20 CPs eligible to participate in the offshore fisheries. In addition, a head-and-gut CP (F/V *Ocean Peace*) met the requirements in the AFA that allows it to harvest and process up to 0.5 percent of the direct BSAI pollock allocation to CPs. Of the 21 AFA qualified CPs, 17 vessels actively fished in 2011.

Separate allocations of the BS pollock TAC are made annually to the offshore CP vessels. This allocation of pollock is not further subdivided by NMFS among the vessels or companies participating in this offshore CP group. However, through formation of cooperatives and under private contractual arrangement, participants in the offshore CP group further subdivide their respective pollock allocations among the participants in their group. The purpose of these cooperatives is to manage the allocations made under the cooperative agreements to ensure that individual vessels and companies do not harvest more than their agreed upon share. The cooperatives also facilitate transfers of pollock among the cooperative members, enforcement of contract provisions, and participation in the voluntary rolling hotspot system inter-cooperative agreement.

Sideboards prevent the AFA fleet from impacting participants in other fisheries. The 20 CPs listed in the AFA are prohibited from harvesting any GOA groundfish. In the BS, AFA CPs are allowed to harvest no more than their "traditional catch" levels in the non-pollock BSAI groundfish fisheries. The Council has generally defined traditional catch to be the retained catch in 1995 through 1997, from all fisheries by these vessels, relative to the total catch. AFA CPs also have PSC sideboard limits, which are based on the percentage of PSC limits used from 1995 through 1997. Specifically, AFA CPs are capped at 8.4 percent of the halibut PSC, 15.3 percent of the *C. opilio* crab PSC, 14 percent of the *C. bairdi* crab in Zone 1, and 5 percent of the Zone 2 *C. bairdi* crab PSC each year. Prohibited species catch of Chinook salmon and chum salmon has been a major issue for the fleet, and numerous regulations and voluntary measures have been implemented over the years to minimize salmon PSC in the pollock fishery.

Amendment 80 identified groundfish trawl catcher/processors that were not covered by the AFA (i.e., the head-and-gut fleet for Amendment 80 vessels) and established a framework for future fishing by this fleet. The framework provided for an allocation of the TACs of six groundfish species among trawl fishery sectors, created Amendment 80 quota share for these vessels, facilitated the development of cooperative arrangements among the vessels, and provided for a competitive fishery among Amendment 80 vessels not entering a cooperative. The fleet currently includes 23 vessels.

Amendment 80 established criteria for harvesters in the Amendment 80 sector to apply for and receive quota share, and for NMFS to initially allocate and transfer quota share. Vessels may choose to operate in a cooperative or in an open access fishery. Cooperative participants could consolidate fishing operations on a specific Amendment 80 vessel or subset of Amendment 80 vessels, thereby reducing monitoring, enforcement, and other operational costs, and permitting more efficient harvest. The opportunity to trade harvest privileges among cooperatives encourages efficient harvesting, and discourages waste.

Each Amendment 80 cooperative receives an exclusive allowance of crab PSC and halibut PSC, amounts which the cooperative may not exceed while harvesting groundfish in the BSAI. This halibut and crab PSC cooperative quota is assigned to a cooperative in an amount proportionate to the amounts of Amendment 80 groundfish quota shares held by its members, and is not based on the amount of crab or halibut PSC historically removed by the cooperative members.

A cooperative structure may allow Amendment 80 vessel operators to better manage PSC rates than do operators who must race to harvest groundfish as quickly as possible before PSC causes a fishery closure. By reducing PSC through more efficient cooperative operations (such as through gear modifications or "hot spot" avoidance) Amendment 80 vessel operators may also increase the harvest of valuable targeted groundfish species and improve revenues that would otherwise be foregone.

Amendment 80 cooperatives may receive a reallocation of an additional amount of cooperative quota, if a portion of the Amendment 80 species, or of crab PSC or halibut PSC allotted to the BSAI trawl limited access sector, is projected to go unharvested. This reallocation to the Amendment 80 cooperatives is at the discretion of NMFS, based on projected harvest rates in the BSAI trawl limited access sector and other criteria. Each Amendment 80 cooperative would receive an additional amount of cooperative quota based on the proportion of the Amendment 80 quota share held by the Amendment 80 cooperative, as compared with all other Amendment 80 cooperatives.

The Amendment 80 program established groundfish and halibut PSC sideboards to limit the ability of Amendment 80 firms to expand their harvest efforts in the GOA. Groundfish harvesting sideboard limits were established for all Amendment 80 vessels, except the F/V *Golden Fleece*. All targeted or incidental catch of sideboard species made by Amendment 80 vessels are deducted from the sideboard limits.

Table 2-11 provides the annual number of trawl catcher/processors with retained catch of Pacific cod in the AI from both directed and incidental catch. Recall that the AI Pacific cod ICA to support other directed groundfish fisheries is unaffected by this action. The number of trawl CPs ranged between 10 and 16 during the 2003 through 2015 period. Fleet size decreased from a high of 16 vessels in 2007 to 11 vessels for most years since that 2007 high. Also provided in the table is the annual retained catch of Pacific cod in the AI, as well as the percent of AI total retained catch. Retained catch of Pacific cod by the trawl CP sector has been declining from the high of 13,759 mt in 2003, to a low of 1,107 mt for 2013. As a percent of total AI retained catch, the trawl CP sector has been catching incrementally smaller portions of the AI total, with the lowest in 2011 at 14 percent, from its high of 52 percent in 2005.

Table 2-11 Number of trawl CPs, and retained catch (mt) of AI Pacific cod, and the percent of AI total retained catch from 2003 through June 26, 2015

Year	Number of vessels	Retained catch (mt)	% of total retained catch of AI Pacific cod
2003	14	13,759	43
2004	15	11,839	42
2005	13	11,079	52
2006	15	9,563	50
2007	16	11,899	43
2008	11	4,677	19
2009	11	4,924	19
2010	11	3,721	17
2011	13	1,448	14
2012	11	2,092	18
2013	11	1,107	16
2014	10	1,285	23
2015*	10	1,454	22

Source: AKFIN, June 26, 2015.

Table orginates from pivot file BSAI_PCOD_SECTOR(06-26)

* 2015 data as of June 26, 2015

Table 2-12 provides annual first wholesale gross revenue from trawl CPs that retained AI Pacific cod. First wholesale gross revenue from the AI Pacific cod fishery ranged from a low of less than one million dollars in 2013, to a high of $23 million in 2007. As a percent of their total first wholesale gross revenue, the AI Pacific cod fishery contributed less than one percent during the past three years, to over 12 percent in 2007. Since the peak in 2007, the number of vessels, catch and first wholesale gross revenue has been in decline.

Table 2-12 AI and BS Pacific cod first wholesale gross revenue and total first wholesale gross revenue for trawl CPs that retained AI Pacific cod, 2003 through 2014

Year	Aleutian Islands		Bering Sea		Total first wholesale gross revenue ($)
	Pacific cod first wholesale gross revenue ($)	Pacific cod revenue as a % of total first wholesale gross revenue	Pacific cod first wholesale gross revenue ($)	Pacific cod revenue as a % of total first wholesale gross revenue	
2003	15,513,530	11.9	7,658,293	5.9	130,620,075
2004	12,989,754	10.5	13,145,864	10.7	123,139,663
2005	14,220,355	8.6	15,074,662	9.2	164,460,591
2006	15,882,314	9.1	19,002,519	10.9	174,530,629
2007	23,188,477	12.7	18,327,979	10.1	181,889,262
2008	8,982,009	4.6	13,409,345	6.8	195,768,134
2009	5,642,162	3.2	11,957,253	6.8	176,989,977
2010	5,022,865	2.3	15,782,302	7.2	220,176,221
2011	1,544,431	0.5	22,221,756	7.1	311,442,348
2012	2,650,785	0.9	21,217,417	7.1	300,124,077
2013	741,834	0.3	22,713,671	10.0	226,906,113
2014	1,178,195	0.5	21,691,886	8.6	251,212,934

Source: AKFIN, June 29, 2015.

Table orginates from pivot file AI_PCOD_DIV(06-29)

Table 2-13 shows the number of years each trawl CP vessel was active in the AI Pacific cod fishery as a CP or as a mothership from 2000 through 2014. Of the total 22 trawl CP vessels that have processed AI Pacific cod during the 2000 through 2014 period, only 10 vessels processed cod at least 12 years. Seven of those 10 vessels processed AI Pacific cod all 15 years. Of these 10 vessels that processed AI Pacific cod, only four processed targeted AI Pacific cod at least 12 years or more. Factoring in mothership activity, only one vessel, the F/V *Katie Ann*[5], processed targeted AI Pacific cod 14 of the past 15 years.

Table 2-13 Number of years each trawl CP vessel processed AI Pacific cod from 2000 through 2014

Vessel	Acting as CP		Acting as mothership	
	Targeted or incidental	Targeted	Targeted or incidental	Targeted
VES1	15	13	9	7
VES2	15	0	0	0
VES3	15	0	0	0
VES4	15	9	1	1
VES5	15	0	0	0
VES6	15	1	0	0
VES7	15	8	4	3
VES8	14	12	0	0
VES9	13	12	0	0
KATIE ANN	12	12	14	14
VES10	8	0	0	0
VES11	8	3	0	0
VES12	8	7	0	0
VES13	6	6	0	0
VES14	4	3	0	0
VES15	3	0	0	0
VES16	3	2	0	0
VES17	2	0	0	0
VES18	2	2	0	0
VES19	1	1	0	0
VES20	1	0	0	0
VES21	1	1	2	2
VES22	0	0	3	3

Source: AKFIN, March 30, 2015

Table orginates from privot file AI_PROC(3-30)

2.6.6.2 Hook-and-line CPs

The primary target species in the freezer longline fisheries are Pacific cod, sablefish, and Greenland turbot. At the end of 2011, 35 licenses carried AI CP hook-and-line Pacific cod endorsements. There were 31 licensed vessels (three vessels carried two license limitation program [LLP] licenses, and one LLP was not attached to a vessel). All of these licenses carried similar endorsements for the BS. (AKRO RAM LLP license list for 2011).

[5] A waiver of confidential data restrictions for the fishing vessel F/V *Katie Ann* was submitted to the Council and NMFS on March 24, 2015.

Since 2006, most of the persons holding LLPs endorsed for freezer longline CPs in the BSAI have been members of the Freezer Longline Conservation Cooperative (FLCC). In June 2010, the remaining LLP holders joined the cooperative, so that with the start of the 2010 B season on August 15, all holders of LLPs authorizing the use of these vessels were members of the cooperative.

Each year, an allocation is made to the freezer longline CP sector through the annual harvest specifications process. Cooperative members each receive a share of the quota for harvest; shares are issued in proportion to historical fishing activity with the LLP. Cooperative members are free to exchange their quota shares among themselves, and to stack shares on individual vessels.

A harvest cooperative running an individual quota program, such as the FLCC, creates the conditions for reorganization of fishing activity. Individual operations now have effectively guaranteed harvest quotas each year, and have the opportunity to fish these in the way that they find most beneficial. However, unlike other cooperatives, which were developed through the Council process, the FLCC is not limited by sideboards. While it is difficult to project exactly how the fishery will evolve, given the technology used in the freezer longline Pacific cod sector, reductions in the number of active vessels, reductions in the speed of the harvest, improvements in product quality, or a lengthening of the fishing season are all possible. Harvest rates declined, the season lengthened, and few vessels were actively participating when the 2011 Steller sea lion protection measures were implemented (NMFS 2012).

Table 2-14 shows the number of hook-and-line CPs with retained catch of Pacific cod from the AI during 2003 through June 26, 2015. The table shows that the number of hook-and-line CPs ranged from one in 2014, to 11 in 2003 and 2010. The number of non-trawl CPs with retained AI Pacific cod catch has been in decline since 2010. Retained catch of AI Pacific cod by the freezer longline increased annually from 851 mt in 2003, to a high of 4,748 mt in 2010, followed by an annual decline through July 15, 2014. The percent of AI Pacific cod retained by the freezer longline sector, relative to the total retained catch for AI, has fluctuated from a low of three percent in 2003, to a high of 27 percent in 2012.

Before 2011, the vessels in this sector generally began fishing for Pacific cod on January 1 and continued until the initial seasonal allocation was fully harvested in February, March, or April. They subsequently returned to fishing Pacific cod from August 15, when the next halibut PSC allowance became available, through November or December. In 2011, the A season remained open until June 10, possibly because the introduction of the voluntary cooperative slowed the harvest rate and spread out effort. Also in 2011, the harvest specifications for halibut PSC in this fleet were modified, to release the halibut PSC limit on June 10, as well as August 15. In 2011 and 2012, the fleet operated during more of the year than in the past. (NMFS 2014b)

During the 2014 season, the combination of AI and BS Pacific cod TAC split and the Steller sea lion protection measures implemented in 2011 limited the ability of the freezer longline sector to participate in the AI Pacific cod fishery. With an AI ITAC of 6,248 mt for 2014, the previous Steller sea lion restrictions that prohibited hook-and-line CPs from fishing in the AI until March 1st, and with that closure of the AI Pacific cod fishery on March 16, only one freezer longline vessel reported retained catch of AI Pacific cod. Since only one freezer longline vessel retained AI Pacific cod during 2014, the catch data are confidential.

Starting in 2015, new Steller sea lion protection measures where implemented. One of these new measures was a change of the A season start date for the non-trawl gear during the BSAI Pacific cod seasonal apportionments to January 1. Utilizing this new start date, three hook-and-line CPs started directing on AI Pacific cod during the first week in January, which was a first for this sector during the

2003 through 2015 period. Since there were only three hook-and-line CPs participated in the 2015 directed Pacific cod fishery, the catch data for these vessels is confidential and could not be published.

Table 2-14 Number of hook-and-line CPs, retained catch (mt) of AI Pacific cod, and the percent of AI total retained catch from 2003 through June 26, 2015

Year	Number of vessels	Retained catch (mt)	% of total retained catch of AI Pacific cod
2003	11	851	3
2004	8	2,937	10
2005	7	2,128	10
2006	9	2,253	12
2007	8	2,268	8
2008	10	4,048	16
2009	10	4,748	19
2010	11	4,576	21
2011	7	1,146	11
2012	7	3,140	27
2013	4	909	13
2014	1	**	**
2015*	3	**	**

Source: AKFIN, June 26, 2015.

Table orginates from pivot file BSAI_PCOD_SECTOR(06-26)

* 2015 data as of June 26, 2015

**Denotes confidentiality

Table 2-15 provides first wholesale gross revenue and total first wholesale gross revenue from all fishing for the hook-and-line and pot CPs that retained AI Pacific cod, of which the largest share is from hook-and-line CP vessels. First wholesale gross revenue from the AI Pacific cod fishery ranged from a low of less than one million dollars in 2003, to a high of 12 million in 2008. As a percent of total first wholesale gross revenue, the AI Pacific cod fishery has ranged from slightly less than one percent in 2013, to nearly 8 percent in 2008. In contrast, the BS Pacific cod fishery has contributed between 52 percent and 64 percent to the total first wholesale gross revenue since 2003. The portion of total first wholesale gross revenue from AI Pacific cod fishery has also been in decline since the peak in 2008. The downward trend in participation, catch, and first wholesale gross revenue for the hook-and-line and the pot CPs is likely due in part to the Steller sea lion protection measures implemented in 2011 and the separation of the AI OFLs, ABCs, and TACs from the BS starting in 2014 combined with lower AI Pacific cod biomass.

Table 2-15 AI and BS Pacific cod first wholesale gross revenue and total first wholesale gross revenue for hook-and-line and pot CPs that retained AI Pacific cod, 2003 through 2014

Year	Aleutian Islands		Bering Sea		Total first wholesale gross revenue ($)
	Pacific cod first wholesale gross revenue ($)	Pacific cod revenue as a % of total first wholesale gross revenue	Pacific cod first wholesale gross revenue ($)	Pacific cod revenue as a % of total first wholesale gross revenue	
2003	987,001	1.0	61,555,281	60.9	101,153,443
2004	3,442,056	3.6	60,281,833	62.2	96,955,852
2005	2,952,484	2.3	78,876,222	61.5	128,267,851
2006	4,094,541	2.9	87,016,764	61.7	140,930,196
2007	4,943,643	3.5	84,572,697	59.8	141,412,812
2008	12,251,729	7.4	88,222,294	53.1	166,236,440
2009	6,898,598	6.1	59,724,783	52.8	113,168,710
2010	7,888,813	6.0	63,125,421	48.4	130,522,324
2011	1,927,426	1.2	96,045,159	57.4	167,340,874
2012	4,705,488	2.9	106,083,142	64.7	164,026,938
2013	1,069,555	0.9	81,145,774	64.8	125,172,040
2014	*	*	94,645,374	66.2	143,029,952

Source: AKFIN, June 29, 2015.

Table orginates from pivot file AI_PCOD_DIV (06-29)

*Denotes confidentiality

Table 2-16 shows the number of years each fixed gear (longline and pot) CP vessel was active in the AI Pacific cod fishery as a CP or as a mothership from 2000 through 2014. Of the total 51 fixed gear CP vessels that have processed AI Pacific cod during the 2000 through 2014 period, only one vessel processed cod at least 10 years during the 15 year period, but that one vessel processed targeted AI Pacific cod only four years of the last 15 years. Four vessels processed AI Pacific cod nine years, while three of these vessels also processed targeted AI Pacific cod nine of the last 15 years. Five fixed gear CPs also acted as a mothership processing AI Pacific cod during the 15 year period only once, but one vessel acted as mothership processing AI Pacific cod three years.

Table 2-16 Number of years each fixed gear CP vessel processed AI Pacific cod from 2000 through 2014

Vessel	Acting as CP		Acting as mothership	
	Targeted or incidental	Targeted	Targeted or incidental	Targeted
VES1	10	4	0	0
VES2	9	9	0	0
VES3	9	9	0	0
VES4	9	0	0	0
VES5	9	9	0	0
VES6	8	8	0	0
VES7	8	7	0	0
VES8	7	3	0	0
VES9	7	6	0	0
VES10	6	5	0	0
VES11	5	3	0	0
VES12	5	4	0	0
VES13	4	4	0	0
VES14	4	4	0	0
VES15	4	3	0	0
VES16	4	4	0	0
VES17	4	4	0	0
VES18	4	4	0	0
VES19	4	4	0	0
VES20	3	3	0	0
VES21	3	3	1	1
VES22	3	3	0	0
VES23	3	0	0	0
VES24	3	3	0	0
VES25	2	0	0	0
VES26	2	2	0	0
VES27	2	1	0	0
VES28	2	2	0	0
VES29	2	2	3	2
VES30	2	2	0	0
VES31	2	1	0	0
VES32	2	2	0	0
VES33	1	1	0	0
VES34	1	1	0	0
VES35	1	1	0	0
VES36	1	1	0	0
VES37	1	1	0	0
VES38	1	0	0	0
VES39	1	1	0	0
VES40	1	0	0	0
VES41	1	1	0	0
VES42	1	0	0	0
VES43	1	1	0	0
VES44	1	1	0	0
VES45	1	1	0	0
VES46	1	1	0	0
VES47	1	1	0	0
VES48	1	1	1	1
VES49	1	1	0	0
VES50	0	0	1	1
VES51	0	0	1	1

Source: AKFIN, March 30, 2015
Table orginates from privot file AI_PROC(3-30)

2.6.6.3 Pot CPs

As with other fleets, the pot CP sector Pacific cod allocation is a BSAI wide allocation and may be fished in the BS and/or in the AI. To fish for Pacific cod with pot gear in the AI, a vessel must have an AI sub-area endorsement on its LLP, as well as a non-trawl endorsement, and a Pacific cod pot gear endorsement if the vessel is 60 feet or greater, length overall. Vessels active in the fishery also fish for sablefish and crab, longline for halibut, and fish for Pacific cod for use as crab bait.

In 2011, five distinct vessels carried five distinct licenses to fish for Pacific cod in the AI as CPs with pot gear. These licenses also carried five endorsements to fish as CPs with pot gear in the BS, four endorsements to fish with hook-and-line gear in the AI (three as CP and one as CV), three endorsements

to fish with hook-and-line gear in the Central and/or Western GOA, and one to fish with pot gear in the Western GOA (AKRO RAM LLP license list for 2011).

Table 2-17 provides estimates on the number of pot CPs, retained catch, and percent of that retained catch relative to the total retained catch for the AI. During the 2003 through June 26, 2015 period, pot CPs were active in the AI Pacific cod fishery only six years. During that period, only two years of catch data can be reported, due to the small number of pot CPs that participated in the fishery. The largest number of pot CPs that were active in the AI Pacific cod fishery was four in 2008. Those four vessels retained 1,895 mt of AI Pacific cod, which was 8 percent of the total retained catch of Pacific cod in the AI.

Table 2-17 Number of pot CPs, retained catch (mt) of AI Pacific cod, and the percent of AI total retained catch from 2003 through June 26, 2015

Year	Number of vessels	Retained catch (mt)	% of total retained catch of AI Pacific cod
2003	0	0	0
2004	0	0	0
2005	0	0	0
2006	1	**	**
2007	1	**	**
2008	4	1,895	8
2009	3	767	3
2010	2	**	**
2011	1	6	0
2012	0	0	0
2013	0	0	0
2014	0	0	0
2015*	0	0	0

Source: AKFIN, June 26, 2015.

Table orginates from pivot file BSAI_PCOD_SECTOR(06-26)

* 2015 data as of June 26, 2015

**Denotes confidentiality

Table 2-15 provides estimates of AI and BS Pacific cod first wholesale gross revenue and total first wholesale gross revenue from all fishing for the hook and line CPs and the pot CPs that retained AI Pacific cod. See 2.6.6.2 for more details concerning first wholesale gross revenue for pot CP sector that participated in the AI Pacific cod fishery.

2.6.6.4 Trawl CVs

Trawl CVs, active in the AI, fish against the 22.1 percent BSAI trawl CV allocation of Pacific cod. Many of the vessels that participate in the directed AI fishery are AFA trawl CVs. These vessels have a sideboard limit of 86.09 percent of the seasonal allocation of trawl CV Pacific cod. Between 2004 and 2011, the AFA trawl CVs harvested an average of 65 percent of the total BSAI trawl CV Pacific cod harvest. However, AFA trawl CVs harvested an average of 85 percent of the total amount of Pacific cod caught by trawl CVs in the AI. The remaining amount of Pacific cod was harvested by unaffiliated trawl CVs.

CVs deliver their products to several outlets. These include CPs acting as motherships, shoreplant processors, or floating processors. Within the AI management area, a small group of CPs (AFA, Amendment 80 and from Crab Rationalization programs) have operated in the AI Pacific cod fishery. There are also processing plants at Adak and Atka. Although Atka shoreplant has not processed Pacific cod in the past, the plant in Adak has processed large amounts of Pacific cod. Relatively small amounts of AI Pacific cod harvested by trawl CVs have also been delivered to several other ports for processing at shoreplants. Finally, floating processors are vessels that anchor within state waters and accept deliveries. As an example, the May 2014 Steller Sea Lion EIS states that the M/V Independence has processed Pacific cod in the winter and spring season. The M/V Independence could buy Pacific cod from as many as 20 CVs, independents, as well as Trident Seafood affiliated boats. These deliveries were primarily from trawlers, but there were some non-trawl vessels, as well (NMFS 2014b).

CVs fish in federally managed fisheries under the authority of licenses issued under the LLP. Vessel licenses carry endorsements, authorizing fishing in different areas with trawl and non-trawl gears. Forty-three CVs have LLP endorsements to trawl in the AI; 12 of these also have endorsements allowing them to use non-trawl (hook-and-line or pot) gear in the AI. Many of these vessels have endorsements allowing them to fish in other management areas as well. Forty-two have endorsements to trawl in the BS; 11 have endorsements to fish with non-trawl gear in the BS. Five have endorsements to trawl in the Western GOA, while 10 have endorsements to use non-trawl gear in the Western GOA. Four have endorsements to use trawl gear in the Central GOA, while seven have endorsements to use non-trawl gear in the Central GOA (AKR RAM LLP license list for 2011).

Table 2-18 provides the annual number of trawl vessels with retained catch of Pacific cod in the AI. The number of trawl vessels ranged between a low of 7 through June 26, 2015, to a high of 34 in 2007. The number of trawl CVs active in the AI Pacific cod has been declining since 2007. Also provided in the table is the annual retained catch of Pacific cod in the AI, as well as the percent of AI total retained catch. Retained catch of Pacific cod by the trawl CV sector has been declining from the high of 14,993 mt in 2009, to a low of 2,696 mt for 2015 (through June 26). As a percent of the total retained AI Pacific cod harvested for all sectors combined, the trawl CV sector harvests the majority. During the 2003 through June 26, 2015, the trawl CV sector harvested between 36 percent and 77 percent of the total retained AI Pacific cod.

Table 2-19 provides estimates of exvessel gross revenues from trawl CVs that retained AI Pacific cod. Exvessel gross revenue from the AI Pacific cod fishery ranged from a low of $2 million in 2014, to a high of $17 million in 2008. As a percent of total exvessel gross revenue, AI Pacific cod has ranged from a low of 2 percent in 2014, to a high of 15.7 percent in 2003. Since the peak in 2007, exvessel gross revenue from the AI Pacific cod fishery, as well as the percent of total exvessel gross revenue from AI Pacific cod, has been in decline.

Table 2-18 Number of trawl CVs, retained catch (mt) of AI Pacific cod, and the percent of AI total retained catch from all sectors from 2003 through June 26, 2015

Year	Number of vessels	Retained catch (mt)	% of total retained catch of AI Pacific cod
2003	32	17,208	54
2004	21	13,439	48
2005	16	7,973	38
2006	16	6,907	36
2007	34	13,172	48
2008	31	13,980	56
2009	26	14,993	59
2010	24	12,724	59
2011	14	7,726	74
2012	15	6,239	54
2013	10	5,097	72
2014	9	4,270	77
2015*	7	2,696	41

Source: AKFIN, June 26, 2015.

Table orginates from pivot file BSAI_PCOD_SECTOR(06-26)

* 2015 data as of June 26, 2015

Table 2-19 AI and BS Pacific cod exvessel gross revenue and total exvessel gross revenue for trawl CVs that retained AI Pacific cod, 2003 through 2014

Year	Aleutian Islands		Bering Sea		Total exvessel gross revenue ($)
	Pacific cod exvessel gross revenue ($)	Pacific cod AI exvessel revenue as a % of total exvessel gross revenue	Pacific cod exvessel gross revenue ($)	Pacific cod BS exvessel revenue as a % of total exvessel gross revenue	
2003	13,650,262	15.7	7,173,932	8.3	86,706,623
2004	6,345,888	8.2	5,861,501	7.6	77,158,825
2005	4,233,506	4.9	6,202,834	7.1	87,262,208
2006	5,375,186	5.6	9,630,382	10.0	96,491,626
2007	12,599,689	12.6	7,284,769	7.3	99,604,142
2008	17,235,691	15.5	8,173,197	7.3	111,223,518
2009	7,777,232	9.8	3,073,577	3.9	79,338,611
2010	6,378,966	8.2	2,861,718	3.7	78,065,680
2011	4,705,224	4.3	9,866,354	9.1	108,875,690
2012	4,265,847	3.6	13,327,843	11.3	117,756,488
2013	2,632,444	2.7	10,248,253	10.3	99,102,338
2014	1,968,370	2.0	9,891,575	9.9	100,290,157

Source: AKFIN, June 29, 2015.

Table orginates from pivot file AI_PCOD_DIV(06-29)

Table 2-20 shows the number of years each of the first 40 trawl or fixed gear CVs, after sorting by frequency of annual harvest count, that harvested AI Pacific cod from 2000 through 2014. Overall, there were 228 trawl or fixed gear CVs that harvested AI Pacific cod at least one year during 2000 through 2014. Twenty-one vessels harvested AI Pacific cod at least 10 years during the past 15 years from 2000 through 2014 period. Two of these vessels harvested AI Pacific cod 14 of the past 15 years, while five of these vessels harvested AI Pacific cod 13 of the past 15 years.

Table 2-20 Number of years the first 40 trawl/fixed gear vessels harvested AI Pacific cod from 2000 through 2014

Vessel	Targeted or incidental	Targeted
VES1	14	14
VES2	14	14
VES3	14	0
VES4	13	1
VES5	13	13
VES6	13	13
VES7	13	2
VES8	13	13
VES9	12	12
VES10	11	0
VES11	11	0
VES12	11	11
VES13	11	11
VES14	11	0
VES15	11	0
VES16	10	3
VES17	10	10
VES18	10	10
VES19	10	10
VES20	10	2
VES21	10	10
VES22	9	1
VES23	9	9
VES24	9	3
VES25	8	5
VES26	8	5
VES27	8	0
VES28	8	8
VES29	8	3
VES30	8	8
VES31	8	2
VES32	8	8
VES33	7	7
VES34	7	2
VES35	7	7
VES36	7	3
VES37	7	4
VES38	7	7
VES39	6	0
VES40	5	5

Source: AKFIN, March 30, 2015
Table orginates from privot file AI_PROC(3-30)

2.6.6.5 Non-trawl CVs

This sector includes CVs retaining AI Pacific cod with jig, hook-and-line, or pot gear. Pot CVs target Pacific cod with square or conical pots, usually set on single lines. Pot CVs less than 60 feet length overall share 2 percent of the BSAI TAC with hook-and-line vessels in that size class, while pot CVs 60 feet or over are allocated 8.4 percent of the TAC. As with other fleets, the pot CV Pacific cod allocations are BSAI wide and may be caught in the BS and/or AI. Vessels active in the Pacific cod fishery may also

fish for halibut (with hook-and-line), sablefish, and crab, if licensed to do so, or target Pacific cod for use as crab bait.

To fish for Pacific cod with pot gear in the AI, a vessel must have an AI subarea endorsement on its LLP, as well as a non-trawl endorsement, and a Pacific cod pot gear endorsement, if the vessel is 60 feet length overall or greater. Three LLP licenses have this combination of endorsements. Two of these licenses carry endorsements allowing them to fish for Pacific cod with pots in the BS, and one has an endorsement allowing it to fish for Pacific cod with pots in the Western GOA. These licenses have no other Pacific cod endorsements (AKR RAM LLP license list for 2011).

Jig vessels target Pacific cod using fishing lines with baited hooks, dropped vertically from the vessel. The action of the lines is controlled by machines that move the jigs up and down a modest amount to induce the fish to bite. Machines are adjusted to haul back when the tension on the line indicates a target weight of fish has been hooked. Jig vessels are less than 60 feet length overall, and no LLP is required for CVs in this length class using jig gear. In the BSAI, the jig sector is allocated 1.4 percent of the Pacific cod TAC. As with other Pacific cod allocations, this may be fished in the AI and/or in the BS (NPFMC 2012).

Longliners deploy ground lines, anchored at each end, along the sea bottom. Shorter lines with baited hooks diverge from the longline at intervals. CVs might deploy 12,300 fathom lengths of longline at a time (73,800 feet or nearly 14 miles), for soak times lasting from two to 24 hours. Longliners under 60 feet length overall share two percent of the Pacific cod TAC with pot vessels of the same length. Longline CVs 60 feet or greater receive an allocation of 0.2 percent of the TAC. As with other Pacific cod allocations, this allocation may be fished in the AI and/or in the BS (NPFMC 2012).

To fish for Pacific cod with longline gear in the AI, a vessel must have an AI sub-area endorsement on its LLP, as well as a non-trawl endorsement, and a Pacific cod longline gear endorsement if the vessel is 60 feet in length overall, or greater. Seven LLP licenses carry the hook-and-line CV endorsement allowing them to fish for Pacific cod in the AI. Four of these licenses also carry endorsements to fish for Pacific cod with CVs in the BS. Licenses also carry a selection of other Pacific cod endorsements (one for BS CPs pot gear, one for AI CV pot gear, one for Western GOA CPs pot gear, one for Western GOA CV pot gear, and one for Central GOA CV hook-and-line gear) (AKR RAM LLP license list for 2011).

Table 2-21 provides the annual number of non-trawl vessels with retained catch of Pacific cod in the AI. The number of non-trawl vessels ranged between a low of 2 through June 26, 2015 to a high of 40 in 2008. Also provided in the table is the annual retained catch of Pacific cod in the AI, as well as the percent of AI total retained catch. Retained catch of Pacific cod by the non-trawl CV sector has been declining from the high of 411 mt in 2008, to a low of 1 mt through June 26, 2015. As a percent of total AI retained Pacific cod catch, the non-trawl CV sector catches the majority. During the 2003 through June 26, 2015, the percent of AI total retained catch for non-trawl CVs has not exceeded 2 percent in any year, and in most cases is 1 percent or less.

Table 2-22 provides exvessel gross revenue for non-trawl CVs that retained AI Pacific cod. Exvessel gross revenue from the AI Pacific cod fishery ranged from a low of slightly more than three thousand dollars in 2009, 2010, and 2012, to a high of slightly less than a half a million dollars in 2008. Overall, the AI Pacific cod fishery contributes very little to the bottom line for the fixed gear CVs. As a percent of total exvessel gross revenue, the AI Pacific cod fishery in general was less 1 percent for most years.

Table 2-21 Number of non-trawl CVs, retained catch (mt) of AI Pacific cod, and the percent of AI total retained catch from 2003 through June 26, 2015

Year	Number of vessels	Retained catch (mt)	% of total retained catch of AI Pacific cod
2003	27	40	0
2004	23	72	0
2005	24	35	0
2006	30	333	2
2007	20	198	1
2008	40	411	2
2009	17	17	0
2010	19	19	0
2011	16	53	1
2012	19	26	0
2013	11	6	0
2014	10	**	**
2015*	2	**	**

Source: AKFIN, June 26, 2015.
Table orginates from pivot file BSAI_PCOD_SECTOR(06-26)
* 2015 data as of June 26, 2015
**Denotes confidentiality

Table 2-22 AI and BS Pacific cod exvessel gross revenue and total exvessel gross revenue for non-trawl CVs, 2003 through 2014

Year	Aleutian Islands		Bering Sea		Total exvessel gross revenue ($)
	Pacific cod exvessel gross revenue ($)	Pacific cod AI exvessel revenue as a % of total exvessel gross revenue	Pacific cod exvessel gross revenue ($)	Pacific cod AI exvessel revenue as a % of total exvessel gross revenue	
2003	14,243	0.1	781,864	3.4	23,202,534
2004	31,850	0.1	329,060	1.3	25,177,647
2005	6,335	0.0	464,599	1.1	40,528,527
2006	277,743	1.2	443,061	1.8	24,076,599
2007	178,787	0.6	890,754	3.0	29,995,179
2008	310,119	0.9	2,840,881	8.0	35,456,275
2009	3,567	0.0	717,550	3.8	18,976,490
2010	3,397	0.0	473,833	1.8	26,593,499
2011	26,363	0.1	1,206,693	3.0	40,596,244
2012	3,689	0.0	2,012,126	6.3	31,728,747
2013	868	0.0	2,025,465	6.4	31,413,036
2014	*	*	2,467,314	9.2	26,934,059

Source: AKFIN, June 29, 2015.
Table orginates from pivot file BSAI_PCOD_DIV(06-29)
* Denotes confidential data

2.6.7 Vessel Homeport

Table 2-23 provides the number of vessels that participated in the AI Pacific cod fishery from 2006 through 2014 by gear and homeport. All total, there were 142 vessels that participated in the AI Pacific cod fishery during the 2006 through 2014 period. Of those 142 vessels, 93 participated only in the Federal AI Pacific cod fishery, while the remaining 49 vessels participated in both Federal and GHL AI Pacific cod fisheries. Of the 142 participating vessels, 57 utilized trawl gear and 85 utilized fixed gear. Seattle

was homeport to the largest number of vessels from the AI Pacific cod fishery at 63 followed by Kodiak at 22.

Table 2-23 Number of vessels that participated in the AI Pacific cod from 2006 through 2014 by gear and homeport

Homeport	Vessel count in the AI Pacific cod fishery 2006 through 2013		
	Trawl gear	Fixed gear	Total
Seattle	34	29	63
Kodiak	5	17	22
Juneau	2	6	8
Dutch Harbor	3	3	6
Adak	0	6	6
Homer	0	5	5
Petersburg	2	2	4
Anchorage	3	0	3
Bellingham	2	0	2
Sand Point	2	0	2
San Francisco	0	2	2
Cordova	0	2	2
Astoria	0	2	2
Sitka	0	2	2
Portland	1	1	2
Ketchikan	0	2	2
Unalaska	1	0	1
Pelican	0	1	1
Port Townsend	1	0	1
Atka	0	1	1
Douglas	0	1	1
Rockland	1	0	1
Winchester Bay	0	1	1
Harbor	0	1	1
Hat Island	0	1	1
Total	57	85	142

Source: AKFIN, December 2014

Table orginates from AI_PCOD_HOMEPORT(12-29)

To provide information on the level of participation in the GHL AI Pacific cod fishery of vessels that participate in the AI Pacific cod fishery, Table 2-24 provides catch from the Federal AI Pacific cod fishery and total AI Pacific cod catch from both federal and GHL fisheries along with the percent of all AI Pacific cod catch from both Federal and GHL fisheries. As seen from the table, 91 percent if the total AI Pacific cod catch was from the Federal fishery and nine percent was from the GHL fishery. Many other communities had a similar ratio, but vessels that homeport in Adak and Petersburg had ratios that favored AI Pacific cod catch from the GHL fishery.

Table 2-24 Vessel count, catch from Federal AI Pacific cod fishery and GHL AI Pacific cod fishery and percent of each fishery by homeport from 2006 through 2014

Homeport*	Vessel count in the federal AI Pacific cod fishery	Catch from federal AI Pacific cod fishery (mt)	Catch from both GHL and federal AI Pacific cod fisheries (mt)	Percent of all AI Pacific cod catch from federal fishery	Percent of all AI Pacific cod catch from GHL fishery
Seattle	63	86,775	95,370	91%	9%
Kodiak	22	3,031	3,716	82%	18%
Juneau	8	2,889	3,115	93%	7%
Dutch Harbor	7	8,876	10,249	87%	13%
Adak	6	174	380	46%	54%
Homer	5	77	91	85%	15%
Petersburg	4	526	1,404	37%	63%
Other Alaska	15	5,378	6,976	77%	23%
Other non-Alaska	12	8,041	8,991	89%	11%
Total	**142**	**115,768**	**130,292**	**89%**	**11%**

Source: AKFIN, December 2014

Table orginates from AI_PCOD_HOMEPORT(12-29)

* Homeports with less than 3 observations where aggregated into other Alaska and non-Alaska categories

2.6.8 Affected Communities of Adak and Atka

Adak and Atka are the two communities located in the AI with processing plants that the delivery requirement is intended to benefit, by prioritizing a portion of AI Pacific cod for delivery to shoreplants in the AI, with some constraints on the amount and dates by which the measure would be removed. Limited profiles of Atka and Adak are provided here from the Final Environmental Impact Statement, Steller Sea Lion Protection Measures for Groundfish Fisheries in the BSAI Management Area, May 2014. Data provided in the section on vessel deliveries and amount (mt) to Adak and Atka shoreplant processors originated from ADF&G fish tickets.

Adak

Adak is located on Kuluk Bay on Adak Island in the Aleutian chain. It is the southernmost community in Alaska. It lies 350 miles west of Unalaska and is not a CDQ community. The Aleut Corporation acquired the majority of Adak's former military facilities in 2004. Since that time, the Aleut Corporation has continued its efforts to develop Adak as a civilian community with a private sector economy focused heavily on commercial fishing. Adak is pursuing a broad range of fisheries for a resident fleet to be able to deliver to Adak Fisheries, the shoreplant processor located on Adak.

The development of a local residential fleet has been a goal of the local leadership, but currently the locally-owned CV fleet is small. Three residents held commercial fishing permits as of 2010 for sablefish, salmon, groundfish, and halibut. Adak is not currently eligible to participate in the CDQ program, but is considered a Community Quota Entity, which allows Adak to purchase halibut CV quota share assigned to Area 4B and sablefish quota share assigned to the AI. While Adak is not a CDQ community, as a result of Congressional action it receives an allocation of Western AI golden king crab to help foster the development and maintenance of sustained fisheries participation. Congressional action has also provided an allocation of AI pollock to the Aleut Corporation for the benefit of Adak, outside of the CDQ program.

Despite the lack of a local residential fleet, Adak has a substantial degree of engagement in the AI Pacific cod fishery. Adak is home to a large shore-based processing plant. Most commercial fishing deliveries to the Adak shoreplant are from larger vessels from outside the area. Of the species processed, Pacific cod, halibut, and sablefish have been the primary species. The community has also seen some crab and Pacific cod activity related to other companies, but these companies are not physically located in the community. When operational, the Adak processing plant was most active from January through March, followed by a relatively quiet period from April through June, and then running about half-speed from July through

September before activity tapering off from October into November. The A season Pacific cod fishery is the main source of income for the plant (and raw fish tax revenue for the City of Adak), accounting for about 75 percent of the plant revenue. The plant has the capability to process one million round pounds (454 mt.) of Pacific cod daily.[6]

Utilizing a previous waiver of confidentiality from the December 2009 Initial Review Draft to Establish Aleutian Islands Pacific cod Processing Sideboards that provided the amount of delivered fish by species to the Adak shoreplant from 2002 through 2008, and additional waivers of confidentiality for delivered fish from 2009 through 2014, Table 2-25 provides information on vessel deliveries and metric tons of Pacific cod and other species landed at the Adak shoreplant from 2002 through 2014. The volume of Pacific cod landings from the AI subarea processed at Adak shoreplant was substantial, accounting for an average of 47 percent of the total CV landings of Pacific cod from the AI subarea (see Table 2-33). In some years, the proportion of Pacific cod from the AI subarea landings processed at the shoreplant was over 80 percent (see Table 2-33). The high level of processing at the Adak facility suggests the importance of the plant in the AI Pacific cod fishery. The vast majority of AI Pacific cod comes from Area 541.

In addition, Table 2-26 also suggests the importance of AI Pacific cod fishery for the Adak facility. As seen in the table, the amount of first wholesale revenue from processing AI Pacific cod harvest during the Federal fishery relative to the total first wholesale gross revenue of all processing has ranged from a low of one percent, when the Adak shoreplant operation was very limited in 2011, to a high of 81 percent in 2005. The AI GHL Pacific cod fishery also contributed a significant amount of first wholesale gross revenue to the Adak facility. Although the first year of the fishery, in 2006, contributed only $349,000, revenue jumped significantly the following year to over $6 million. In the subsequent years, when the Adak facility was operational, the GHL fishery continued to provide a significant amount of first wholesale gross revenue for the facility. In fact, during the 2012 through 2014 period, the proportion of first wholesale gross revenue from the GHL fishery increased relative to the revenue from the Federal fishery, climbing as high as 61 percent in 2014.

The Adak shoreplant has had numerous ownership changes since its establishment in 1999 as Adak Seafoods. In mid-July 2000, Norquest became a predominant partner. In January 2002, Icicle Seafoods became an equal partner in the operation, which operated as Adak Fisheries, LLC. Other ownership changes ensued, although until recently, the company still operated as Adak Fisheries, LLC. In 2009, the price of Pacific cod dropped to less than half of the 2008 price. As a result, Adak Fisheries struggled to meet its financial obligations, and in the end, filed for Chapter 11 bankruptcy in September 2009. During 2010 and 2011 fishing years, financial difficulties surrounding the Adak shoreplant resulted in no processing of Pacific cod. In 2012, the shoreplant, operated by Icicle Seafood, was once again open for business, processing a large portion of AI Pacific cod. In April 2013, Icicle Seafoods closed its operation in Adak citing concerns about the health of the region's Pacific cod resource and increased regulatory uncertainty surrounding AI Pacific cod. In June 2013, the City of Adak was the highest bidder in an auction for the processing equipment formerly owned by Adak Seafoods, LLC. The intent of the purchase by the city was to keep the processing equipment in place, as a turnkey operation, in order to facilitate the expedited reopening of the plant. In September 2013, Aleut Corporation's subsidiary Aleut Fisheries signed a 20-year lease with Adak Cod Cooperative to operate the Adak seafood processing facility.

Adak Cod Cooperative renovated the Adak seafood processing facility from a head and gut operation into a fillet operation. The renovated shoreplant began processing AI Pacific cod in early February 2014, utilizing six trawl CVs, four greater than 60' in length and two that were 58' in length. In addition, US Seafoods agreed to process only incidentally caught AI Pacific cod while targeting other AI fisheries.

[6] Source: Dave Fraser, Adak Community Development Corporation, July 2013.

Unfortunately, the Adak Cod Cooperative closed its operation at the Adak shoreplant processing facility in May 2014.

In early 2015, Premier Harvest, LLC. purchased fishing processing equipment from the City of Adak, replaced the roof of the facility, and signed a 20 year lease with the Aleut Corporation for the Adak fish processing facility. Premier Harvest has been processing live crab in Adak since 2010. Premier Harvest specializes in premium live and fresh crab with shipments domestically, as well as Europe, Asia, and Middle East. Since Premier Harvest is focused on live crab, the company is looking for another seafood company to process Pacific cod at the facility.

With no other shore-based processor in the community, the Pacific cod processing activity at the Adak shoreplant accounts for a large proportion of effort and local employment in Adak. The A season Pacific cod fishery "overwhelms anything else that happens during the rest of the year, not just in terms of volume at the plant, but in terms of crew utilizing local businesses (the fuel, dock, store, and bar); without A season cod, the plant does not survive" (EDAW 2008).

The community of Adak also acts as a port of embarkation and disembarkation for CPs and CVs, immediately before and immediately after trips targeting Pacific cod in the AI subarea, as well as AI Atka mackerel and/or AI pollock. As a port of embarkation and disembarkation, Adak receives a substantial amount of economic activity involving a range of goods and services present in the small community. The annual average port calls for CPs (trawl and non-trawl combined) immediately before and after trips targeting AI Atka mackerel and Pacific cod in the AI subarea during 2004 through 2010 was 43.6 and 28.9, respectively and for 2011, the number of port visits was 28 and 13, respectively (NMFS 2014b). For CVs (trawl and non-trawl combined) immediately before and after trips targeting Pacific cod in the AI subarea, port calls numbered 119.7, on an annual average basis, with the analogous data related to CV AI Atka mackerel being confidential; for 2011, the number of port calls was 11 for AI Pacific cod, while for AI Atka mackerel the number of port calls was confidential (NMFS 2014b).

Although Adak has a relatively low impact multiplier, the money spent on goods and services by vessels making port calls does circulate in the small economy of Adak. Vessels may use these port visits for crew transfers, purchasing provisions and fuel, offloading product, and purchasing other local goods and services.

Table 2-25 Number of vessels delivering and amount (mt) to Adak and Atka shoreplant processors from 2003 through 2014

Year	Fishery	Adak		Atka	
		Vessels	Metric tons	Vessels	Metric tons
2002	AI Pacific cod	37	8,527	0	0
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	0	0	0	0
	Halibut	39	1,049	9	231
	Sablefish	25	468	1	*
	Crab	26	874	0	0
	Other Groundfish	32	569	1	0
2003	AI Pacific cod	30	8,729	0	1
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	0	0	0	0
	Halibut	40	624	7	363
	Sablefish	26	245	6	6
	Crab	19	959	0	0
	Other Groundfish	27	296	6	6
2004	AI Pacific cod	33	9,475	0	0
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	0	0	0	0
	Halibut	34	438	6	234
	Sablefish	22	113	4	7
	Crab	9	691	0	0
	Other Groundfish	31	158	4	7
2005	AI Pacific cod	25	6,462	0	0
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	0	0	0	0
	Halibut	30	342	5	157
	Sablefish	19	276	3	2
	Crab	6	175	0	0
	Other Groundfish	20	293	3	2
2006	AI Pacific cod	24	6,321	1	*
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	5	200	0	0
	Halibut	20	132	5	155
	Sablefish	11	67	4	123
	Crab	0	0	0	0
	Other Groundfish	18	1,001	4	124
2007	AI Pacific cod	35	9,625	1	*
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	31	2,939	0	0
	Halibut	34	176	5	139
	Sablefish	16	72	3	77
	Crab	4	190	0	0
	Other Groundfish	17	1,509	3	77
2008	AI Pacific cod	36	4,327	1	*
	BS and GOA Pacific cod	1	*	0	0
	State GHL Pacific cod	26	1,288	0	0
	Halibut	29	168	6	169
	Sablefish	13	127	3	9
	Crab	3	380	0	0
	Other Groundfish	22	801	2	*

Source: AKFIN, June 30, 2015.

Table orginates from pivot file AI_PCOD_PROC_DIV(08-13)

*Denotes confidential data

Table 2-25 continued

Year	Fishery	Adak		Atka	
		Vessels	Metric tons	Vessels	Metric tons
2009	AI Pacific cod	18	8,005	0	0
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	14	372	0	0
	Halibut	10	0	0	0
	Sablefish	1	*	0	0
	Crab	0	0	0	0
	Other Groundfish	2	*	0	0
2010	AI Pacific cod	0	0	1	*
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	0	0	0	0
	Halibut	0	0	8	249
	Sablefish	0	0	5	99
	Crab	0	0	1	*
	Other Groundfish	0	0	4	99
2011	AI Pacific cod	6	23	0	0
	BS and GOA Pacific cod	1	*	0	0
	State GHL Pacific cod	3	30	0	0
	Halibut	16	265	9	248
	Sablefish	11	120	5	149
	Crab	1	*	1	*
	Other Groundfish	11	122	5	155
2012	AI Pacific cod	16	3,173	0	0
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	23	4,383	0	0
	Halibut	33	398	13	203
	Sablefish	16	103	8	278
	Crab	2	*	0	0
	Other Groundfish	23	129	8	283
2013	AI Pacific cod	6	3,568	1	*
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	12	4,829	0	0
	Halibut	12	4	18	189
	Sablefish	0	0	8	133
	Crab	1	*	1	*
	Other Groundfish	5	4	8	136
2014	AI Pacific cod	3	2,479	3	5
	BS and GOA Pacific cod	0	0	0	0
	State GHL Pacific cod	6	4,115	0	0
	Halibut	0	0	12	167
	Sablefish	0	0	6	113
	Shellfish	2	*	0	0
	Other Groundfish	0	0	6	112

Source: AKFIN, June 30, 2015.

Table orginates from pivot file AI_PCOD_PROC_DIV(07-01)

*Denotes confidential data

Table 2-26 Adak AI Pacific cod first wholesale gross revenue from federal and GHL fisheries and percent of total first wholesale revenue 2002 through 2014

Year	Pacific cod first wholesale gross revenue from federal waters ($)	Percent of total first wholesale gross revenue from federal Pacific cod fishery	Pacific cod first wholesale gross revenue from GHL Pacific cod fishery ($)	Percent of total first wholesale gross revenue from GHL Pacific cod fishery	Total first wholesale gross revenue from Pacific cod ($)[1]	Total first wholesale gross revenue ($)[2]
2002	9,925,122	0.35	0	0.00	9,925,122	28,010,885
2003	10,987,637	0.40	0	0.00	10,987,637	27,130,015
2004	13,335,795	0.56	0	0.00	13,335,795	23,784,597
2005	21,698,399	0.81	0	0.00	21,698,399	26,767,300
2006	11,049,718	0.77	349,619	0.02	11,399,337	14,331,093
2007	20,273,992	0.63	6,190,677	0.19	26,464,669	32,219,545
2008	10,749,110	0.53	3,199,643	0.16	13,948,753	20,094,992
2009	9,507,378	*	441,817	*	9,949,195	*
2010	0	0.00	0	0.00	0	0
2011	44,491	0.01	58,032	0.01	102,523	6,063,385
2012	5,277,290	0.29	7,289,745	0.41	12,567,035	17,985,735
2013	3,665,432	0.42	4,960,866	0.57	8,626,298	8,666,785
2014	3,032,707	0.38	5,034,122	0.62	8,066,829	8,066,829

Source: AKFIN, July 6, 2015.

Table orginates from pivot file AI_PCOD_PROC_DIV(07-01) for MT data and AI_PCOD_PROC_DIV2(07-6) for revenue data

* Adak processor did not file a COAR report for 2009 Pacific cod revenue

[1]Total Pacific cod revenue for 2009 was estimated using shoreside BS Pacific cod first wholesale price for whole fish

[2]Total revenue for 2012 through 2014 does not include revenue from crab due to confidential data

Atka

The community of Atka is located on Atka Island on the Aleutian Chain, about 100 miles east of Adak and 350 miles west of Unalaska. Atka encompasses 8.7 square miles of land and 27.4 square miles of water. Aside from Adak, it is the only civilian community in the AI subarea.

The island has been occupied for over 2,000 years by Aleut residents and became a major trade site for Russian settlers in the 1700s. By the 1920s, Atka had become a center for fox farming. The island was evacuate during World War II after the Japanese military attacked Unalaska and landed on Attu and Kiska. After World War II, former residents of Attu, Kiska, and Atka relocated to the island.

Atka was incorporated as a second class city in 1988. The population for the community is relatively small, estimated at 61 total persons by the latest U.S. Census. Residents of Atka are primarily Alaska Native (Aleut), and a federally-recognized tribe is located in the community (the Native Village of Atka Indian Reorganization Act (IRA)).

The economy is predominantly based on subsistence living, as well as commercial halibut and sablefish fishing. According to the Commercial Fisheries Entry Commission (CFEC), 4 commercial permits were held by residents. No other permits were held in Atka for other fisheries (CFEC 2012). Atka is a CDQ community and a member of the Aleutian Pribilof Island Community Development Association (APICDA) CDQ group. As a member of APICDA, the community benefits from the CDQ shares in a number of commercial fisheries, including Pacific cod, Atka mackerel, yellowfin sole, rock sole, Greenland turbot, arrowtooth flounder, flathead sole, Pacific ocean perch, Pacific halibut, various crab fisheries, and Chinook salmon. In 2011, specific to AI Pacific cod, APICDA had an effective allocation within the CDQ reserve of 15.45 percent. In recent years, APICDA has used CDQ funds to construct small and large dock facilities, add infrastructure to Atka's harbor, improve the Alaska Pride Seafood plant, and construct a new inn for visitors.

As indicated in Table 2-25, Atka was not directly engaged in the AI Pacific cod fishery during 2003 through 2013, through local ownership of participating CVs, local ownership of participating CPs, or

processing operations at the local shore-based processor in the community. Atka had essentially no dependency on the AI Pacific cod fishery.

The processing plant that is located in Atka is a joint venture between APICDA Joint Ventures and the Atka Fisherman's Association. They formed Atka Pride Seafoods in 1994, began processing in 1995, and have processed every year since. The primary species processed are halibut and sablefish, and the commercial fleet delivering to Atka is involved mainly in those fisheries. According to senior APICDA staff, Pacific cod is seen as the linchpin for the future of processing in the community, an assessment that has led to substantial infrastructure investments by the group. The shoreplant recently completed a $4 million expansion, and will begin another major round of improvement in 2014, to make the plant a year-round operation. Once these improvements are completed, sometime in late 2014 or 2015 at the latest, the processing capacity of the shoreplant will be no more than 400,000 round pounds of Pacific cod per day (181 mt.).[7]

There is also interest in developing processing capacity for Western AI golden king crab at the plant, with both APICDA and the Atxam Corporation (Atka's Alaska Native Claim Settlement Act (ANCSA) village corporation) having acquired processor quota shares for that species.[8] According to APICDA staff, impediments to crab processing in the community have included lack of deep water vessel access (now addressed through the new dock), and the fact that the Western AI golden king crab fishery is essentially a one-vessel fishery with deliveries made approximately once every two weeks during the fishing season. For efficiency reasons, other relatively high volume processing is needed at the plant to justify both the investment in an increased processing capacity and the retention of a sufficient number of processing workers. Therefore, AI Pacific cod processing is seen as a potential fishery for both of these needs from APICDA's perspective. However, as noted in section 2.7.1, the current state of the AI Pacific cod fishery is an eight week fishery from early February to late March, and the proposed action alternative would likely not change the temporal nature of the fishery. This short-term fishery, which can be a high volume fishery relative to other AI fisheries, does not by itself provide an economic environment conducive for retention of processor workers beyond this eight week period.

In terms of overall community development, it is an explicit goal of APICDA to have processing occur year-round in Atka. According to APICDA staff, communities in the region with a stable or growing population base and local economy are those with a year-round shore-based processing plant, which has driven the targeted investments in Atka. It is assumed that four or five of the existing vessels in the community fleet could fish Pacific cod, but none of the local vessels are higher volume deep water vessels; developing year-round processing and harvesting capacity is an evolving process and will require additional capital investments in Atka, including additional harbor improvements.

2.6.9 State and Municipal Fishery Taxes

The State of Alaska taxes fish processed outside of and first landed in Alaska, fish processed in Alaska, and raw fish exported from Alaska, and shares of portion of these revenues with qualified boroughs and/or municipalities in Alaska. The State of Alaska also retains portions of the revenues raised from

[7] Source: Larry Cotter and John Sevier, APICDA, August 2013.

[8] Under the BSAI crab rationalization program, half of the Western AI golden king crab quota shares have a western share landing/processing region designation and half do not. While processors in Adak and Atka, the two communities in the western share landing/processing region, did not qualify for an initial history-based allocation of Western AI golden king crab processor quota shares, some processor quota shares for Western AI golden king crab were subsequently acquired from Unalaska/Dutch Harbor shore-based processors by APICDA and Atxam through a divestiture process described elsewhere (AECOM 2010). To date, processing of these share has variously occurred in Adak or un Unalaska (with the latter occurring under custom processing agreements when processing capacity was otherwise not available in the western share landing/processing region.

these taxes for its own use. The amount of money distributed depends on the taxes collected during the program base year, as defined in Alaska statute, and on other factors. These other factors include the organization of each borough in which processing or landings occur and number of incorporated cities in each borough. The two cities highlighted in this section, Adak and Atka, lie within the Aleutian West Census Area, and are not in an organized borough.

Both Fisheries Business Taxes and Fisheries Resource Landing taxes are generally levied against fishery resources processed, landed, or exported in the preceding calendar year. For example, fiscal year 2012 payments or shared fishery tax revenues were generally derived from taxes collected in calendar year 2011.

The Fisheries Business Tax is generally paid by the first processor of processed fish, or the exporter of unprocessed fish, on raw fish landed in the State of Alaska, and is based on the exvessel price of unprocessed fish. The tax rates vary from 1 percent to 5 percent, depending on whether the fishery resource is considered "established" or "developing," and whether it was processed by a shore-based or floating processor. Currently, the tax rates for established fisheries are 3 percent for fishery resources processed at shore-based plants and 5 percent for those processed at floating processors (Alaska Statue 43.75.015).

The State retains half of the Fisheries Business Tax and returns the balance to communities and organized boroughs where, or near where, fish were landed and processed. Revenues for fish landed within a municipality's boundaries are shared with communities by the Alaska Department of Revenue (DOR). Revenues for landings outside of municipal boundaries are shared with communities by the Division of Community and Regional Affairs () of the Alaska Department of Commerce. The DCRA first allocates the revenues raised statewide in proportion to the share of statewide pounds of fish and shellfish processed in 19 different Fishery Management Areas (FMA), then within FMAs by formulas that may vary by FMA. The Aleutian Islands communities most directly affected by this action, Adak and Atka, fall in the FMA that distributes 60 percent of these latter revenues equally among four affected communities (in addition to the two mentioned, Akutan and Dutch Harbor are included) and the Aleutians East Borough, and 40 percent in proportion to the populations of the four communities. The shared revenues for Adak and Atka are summaries in Table 2-27 and Table 2-28.

In addition to the share of Fishery Business tax, and the shared Fisheries Resource Landing tax, described above, municipalities may collect their own raw fish taxes on landings. Municipal raw fish taxes vary by community, and, where they exist, range from approximately 1 percent to 3 percent of the unprocessed value of the fishery resources. Municipalities may impose other taxes that may be affected by fishing activity, including sales taxes, bed taxes, and fuel transfer taxes.

Adak levies a 4 percent sales tax and a $0.02/gallon fuel transfer tax. Of the $1.64 million in FY 2013 estimated taxes collected by Adak for the community of Adak, 30.9 percent are from Fisheries Business and Resource Landing taxes. Through 2012, Adak did not levy a dedicated local raw fish tax, although a portion of its sales tax was derived from fish sales. The amount of the sales tax attributed to fish sales is not reported in the Alaska Department of Commerce, Community, and Economic Development data, but approximately 1/3 of the tax base for Adak originated from actives associated with the fishing industry. In December 2012, Adak voted to adopt a 2 percent raw fish tax, and to modify sales tax so that it no longer applied to raw fish sales by fishermen. The raw fish tax was implemented in January 2013. This was done to set Adak's fish tax rate at a level comparable to other Aleutian Islands and Bristol Bay communities (NMFS 2014b).

Atka levies a 2 percent raw fish tax, and a 10 percent bed tax; these tax rates have been in place for several years, and were not revised for 2013. In 2012, of approximately $921,734 in total municipal revenues in Atka, approximately $250,000 came from the local raw fish tax, the shared Fisheries Business Tax, and the shared Resource Landing Tax. Aggregate fisheries taxes represent approximately 27 percent of the fiscal year 2012 revenues for the municipality.

Table 2-27 State fisheries business tax revenues for Adak

Department of Revenue FY reporting year	CY of fishing activity	Department of Revenue		Division of Community and Regional Affairs	
		Fishery Business Tax - shared ($)	Landing Tax-shared ($)	Fishery Business Tax - shared ($)	Landing Tax-shared ($)
2008	2007	254,359	128,199	124,918	131,352
2009	2008	311,439	97,736	107,123	201,055
2010	2009	13,567	54,949	98,973	92,919
1011	2010	143,848	40,219	122,742	165,964
2012	2011	75,469	61,035	145,816	115,360

Provided be Division of Community and Regional Affairs, January 6, 2013
Table orginates from file Oct 14 Initial Review AI Pcod Allocation Tables

Table 2-28 State fisheries business tax revenues for Atka

Department of Revenue FY reporting year	CY of fishing activity	Department of Revenue		Division of Community and Regional Affairs	
		Fishery Business Tax - shared ($)	Landing Tax-shared ($)	Fishery Business Tax - shared ($)	Landing Tax-shared ($)
2008	2007	18,349	16,413	119,953	126,132
2009	2008	80,923	14,134	99,901	187,500
2010	2009	0	9,682	93,115	87,420
1011	2010	57,861	10,377	106,976	144,645
2012	2011	51,168	18,946	126,575	100,138

Provided be Division of Community and Regional Affairs, January 6, 2013
Table orginates from file Oct 14 Initial Review AI Pcod Allocation Tables

2.6.10 Product Composition and Flow of Pacific Cod

The following information on production composition and flow of Pacific cod originates from the 2013 Economic Status of the Groundfish Fisheries of Alaska (NMFS 2014c).

Product flows for Pacific cod have changed following the decline of Atlantic cod (*G. morhua*) harvests. Buyers from Norway and Portugal began purchasing Pacific cod from Alaska for the first time in the late 2000's. Historically, Pacific cod was considered an inferior product compared to Atlantic cod, but the decline of Atlantic cod has made Pacific cod more acceptable.

Pacific cod are processed as either headed and gutted (H&G), fillet blocks, or individually frozen fillets, which are either individually quick-frozen (IQF) or processed into shatterpack (layered frozen fillets that separate individually when struck upon a hard surface) or layer pack. The final markets include fine or "white tablecloth" restaurants, institutional food service quick-service restaurants, retail fish markets, grocery stores, and overseas markets.

Wholesale prices are highest for fillet products, but H&G accounts for the largest share of Alaska Pacific cod production. The H&G production was significant in the mid-90's at roughly 50 percent. Since the H&G's share of production increased reaching 66 percent in 2003 and climbed further to upwards of 70 percent in recent years. Fillet production since 2009 has ranged between 12 percent and 13 percent.

Production shares of other minimally processed goods have decreased substantially since the mid-90's with salted-and-split (29 percent to < 1percent) and whole fish (47 percent to 3 percent). Increased exports of H&G product to China where it is filleted and re-exported have surely contributed to the shift.

H&G Pacific cod is frozen after the first processing, and then proceeds to another processor within the U.S., or is exported for secondary processing. Some domestic H&G Pacific cod is sent to the East Coast refresh market, where it is thawed and filleted before being processed further, or sold as refreshed. Other U.S. processors may purchase H&G Pacific cod and further process it by cutting it into sticks and portions, or breading it for sale in grocery stores or food services. Foreign consumers, especially China, Japan, and Europe, also purchase H&G Pacific cod for further processing, including the production of salt cod. According to industry representatives, large H&G Pacific cod command the highest price, and it is these fish that are processed into salt cod.

The wholesale prices for H&G Pacific cod caught and processed by fixed gear (freezer longline) vessels have been consistently higher than the prices received by trawl vessels. According to an industry representative, this price difference occurs because fish caught by longline gear can be bled while still alive, which results in a better color fish, and there is less skin damage and scale loss than if they are caught in nets. In contrast, shoreplant processors obtain fish from both fixed gear and trawl vessels, and the fish have been dead for many hours before they are processed (although they are generally kept in refrigerated saltwater holds).

Representatives of American Seafoods noted that discussions with potential buyers concerning BS and AI Pacific cod start several months before the season actually begins. It was noted that one of the most important factors of Pacific cod suppliers is being viewed as a reliable and consistent source of cod products from one year to the next. Another important factor in the Pacific cod fishery is market timing. Asian buyers, particularly the Japanese, are accustomed to making their buying commitments early in the year. In addition, as the volume of Pacific cod product streams into the market during the first few months of the season, demand and price for Pacific cod tend to decline. These market signals provide an incentive for suppliers of Pacific cod products to start fishing and processing AI Pacific cod as early as mid-February. Also quality of Pacific cod caught late in March and into April begins to deteriorate. Once Pacific cod have spawned, the roe (which is the most valuable product made from Pacific cod) becomes watery and losses value. Flesh quality decreases markedly in post-spawned fish, further decreasing the value.

2.7 Expected Effects of the Alternatives

This section presents a discussion of aspects of the economic and distributional effects that might be expected to occur as a result of prioritizing access to the A season AI Pacific cod fishery for CVs delivering to shoreplants in the AI management area. The impetus for the action originated with the shoreplant processor and community representatives from Adak in 2008, and the concern that increased entry by processing vessels (motherships, CPs, and floating processors) would erode the historical shoreplant processing share of the AI Pacific cod.

Assessing the effects of the alternatives and options involves some degree of speculation. In general, the effects arise from the actions of individual participants in the fisheries, under the incentives created by different alternatives and options. Predicting these individual actions and their effects is constrained by incomplete information concerning the fisheries, including the absences of complete economic information and well-tested models that predict behavior under different institutional structures. In addition, exogenous factors, such as stock fluctuations, market dynamics, and macro conditions in the global economy, will influence the response of the participants under each of the alternatives and options.

2.7.1 Alternative 1: No action

Alternative 1 is the no action alternative. Alternative 1 would not prioritize a portion the AI Pacific cod TAC for access by CV sectors for a specified time period, or require AI Pacific cod to be delivered to shoreplants west of 170 degrees longitude. Alternative 1 would also not restrict the trawl CV BS allocation for a period of time to facilitate an inshore AI Pacific cod fishery. Alternative 1 would be expected to maintain the status quo, in which sectors that are currently active in the AI Pacific cod fishery will continue to be active in the fishery for the foreseeable future. Thus, this section provides background information intended to characterize the status quo.

2.7.1.1 Harvest distribution of AI Pacific cod

Table 2-29 shows the amount and proportion of retained Pacific cod catch in the BS and AI management areas, excluding CDQ data and State GHL fishery catch data. The data in the table shows that retained catch from the AI was between 15 percent and 16 percent of the combined BSAI retained catch from 2003 through 2004. In 2005 and 2006, retained catch from the AI declined to about 11 percent each year. From 2007 through 2010 period, retained catch in the AI relative to the combined BSAI catch increased, ranging from 15 percent to almost 18 percent. In 2011 through 2013, harvest from the AI declined significantly due to the implementation of the Steller sea lion protection measures and other factors. In 2011, retained harvest from the AI accounted for 5 percent of the total BSAI retained catch, while in 2012 and through June 26, 2015, the AI accounted for between 5 percent and 3 percent of the total BSAI retained catch.

Table 2-29 Pacific cod catch in the Aleutian Islands and Bering Sea from 2003 through June 26, 2015 (in metric tons and percent of total)

Year	AI		BS		Total BSAI retained catch (mt)
	Retained catch (mt)	% of total	Retained catch (mt)	% of total	
2003	31,859	17	158,506	83	190,365
2004	28,287	15	165,885	85	194,172
2005	21,214	11	166,328	89	187,542
2006	19,138	11	153,520	89	172,658
2007	27,677	18	127,620	82	155,297
2008	25,012	17	121,623	83	146,635
2009	25,449	17	127,886	83	153,335
2010	21,702	15	125,657	85	147,359
2011	10,378	5	184,540	95	194,918
2012	11,497	5	207,291	95	218,788
2013	7,119	3	207,910	97	215,029
2014	5,561	3	202,709	97	208,270
2015*	6,521	5	118,598	95	125,120

Source: AKFIN, June 26, 2015.

Table orginates from pivot file BSAI_PCOD_SECTOR(06-26)

* 2015 data as of June 26, 2015

Table 2-30 shows retained Pacific cod catch, by sector, for AI and BS from 2003 through June 26, 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.

Table 2-30 Retained Pacific cod catch (mt) and percent of total Pacific cod catch in AI and percent of total Pacific cod catch in the Bering Sea and Aleutian Islands areas, by sector, 2003 through June 26, 2015

Year	Sectors	AI			BS			BSAI	
		Vessels	Metric tons	% of BSAI	Vessels	Metric tons	% of sector BSAI	Vessels	Metric tons
2003	HAL CP	11	851	1	39	92,786	99	50	93,637
	HAL CV	26	40	8	29	484	92	55	524
	JIG	1	*	*	14	*	*	15	156
	POT CP	0	0	0	3	1,547	100	3	1,547
	POT CV	0	0	0	69	18,232	100	69	18,232
	TRW CP	14	13,759	42	39	19,077	58	53	32,836
	TRW CV	32	17,208	40	113	26,225	60	145	43,433
Total		84	31,859	17	306	158,506	83	390	190,365
2004	HAL CP	8	2,937	3	39	91,442	97	47	94,379
	HAL CV	23	72	10	26	624	90	49	696
	JIG	0	0	0	16	231	100	16	231
	POT CP	0	0	0	3	3,234	100	3	3,234
	POT CV	0	0	0	72	13,957	100	72	13,957
	TRW CP	15	11,839	29	40	29,018	71	55	40,858
	TRW CV	21	13,439	33	105	27,379	67	126	40,817
Total		67	28,287	15	301	165,885	85	368	194,172
2005	HAL CP	7	2,128	2	39	96,616	98	46	98,744
	HAL CV	22	22	2	42	1,109	98	64	1,130
	JIG	2	*	*	17	*	*	19	117
	POT CP	0	0	0	2	*	*	2	*
	POT CV	0	0	0	60	13,702	100	60	13,702
	TRW CP	13	11,079	32	39	23,807	68	52	34,886
	TRW CV	16	7,973	22	104	27,652	78	120	35,625
Total		60	21,214	11	303	166,328	89	363	187,542
2006	HAL CP	9	2,253	3	39	82,343	97	48	84,596
	HAL CV	26	21	3	46	634	97	72	655
	JIG	1	*	*	11	*	*	12	91
	POT CP	1	*	*	3	*	*	4	3,148
	POT CV	3	305	2	61	15,831	98	64	16,136
	TRW CP	15	9,563	28	39	25,102	72	54	34,664
	TRW CV	16	6,907	21	100	26,461	79	116	33,367
Total		71	19,138	11	299	153,520	89	370	172,658
2007	HAL CP	8	2,268	3	37	65,776	97	45	68,044
	HAL CV	18	46	10	48	427	90	66	473
	JIG	1	*	*	9	*	*	10	83
	POT CP	1	*	*	3	*	*	4	2,755
	POT CV	2	*	*	61	*	*	63	14,728
	TRW CP	16	11,899	32	39	25,836	68	55	37,735
	TRW CV	34	13,172	42	103	18,308	58	137	31,480
Total		80	27,678	18	300	127,620	82	380	155,298
2008	HAL CP	10	4,048	5	37	71,495	95	47	75,543
	HAL CV	30	173	15	62	983	85	92	1,156
	JIG	9	156	89	6	19	11	15	176
	POT CP	4	*	*	2	*	*	6	3,671
	POT CV	1	*	*	56	*	*	57	15,514
	TRW CP	11	4,677	23	39	15,359	77	50	20,036
	TRW CV	31	13,980	45	102	16,804	55	133	30,784
Total		96	25,012	17	304	121,869	83	400	146,881
2009	HAL CP	10	4,748	6	38	78,406	94	48	83,154
	HAL CV	17	17	3	41	582	97	58	600
	JIG	0	0	0	3	13	100	3	13
	POT CP	3	*	*	2	*	*	5	3,513
	POT CV	0	0	0	44	10,552	100	44	10,552
	TRW CP	11	4,924	19	36	21,188	81	47	26,112
	TRW CV	26	14,993	51	100	14,398	49	126	29,390
Total		67	25,449	17	264	127,886	83	331	153,335
2010	HAL CP	11	4,576	6	36	66,986	94	47	71,562
	HAL CV	19	19	5	39	387	95	58	406
	JIG	0	0	0	7	344	100	7	344
	POT CP	2	*	*	3	*	*	5	3,361
	POT CV	0	0	0	45	16,728	100	45	16,728
	TRW CP	11	3,721	14	34	23,233	86	45	26,955
	TRW CV	24	12,724	45	96	15,280	55	120	28,004
Total		67	21,702	15	260	125,658	85	327	147,359

Source: AKFIN, June 26, 2015.

Table orginates from pivot file BSAI_PCOD_SECTOR(06-26)

* Denotes confidentiality

** 2015 data as of June 26, 2015

Table 20 continued

Year	Sectors	AI			BS			BSAI	
		Vessels	Metric tons	% of BSAI	Vessels	Metric tons	% of sector BSAI	Vessels	Metric tons
2011	HAL CP	7	1,146	1	29	95,202	99	36	96,348
	HAL CV	16	53	10	38	463	90	54	515
	JIG	0	0	0	11	505	100	11	505
	POT CP	1	*	*	4	*	*	5	3,102
	POT CV	0	0	0	48	23,938	100	48	23,938
	TRW CP	13	1,448	5	36	29,354	95	49	30,802
	TRW CV	14	7,726	19	104	31,939	81	118	39,666
Total		51	10,378	5	270	184,498	95	321	194,876
2012	HAL CP	7	3,140	3	31	109,846	97	38	112,987
	HAL CV	19	26	4	29	589	96	48	615
	JIG	0	0	0	5	85	100	5	85
	POT CP	0	0	0	5	4,178	100	5	4,178
	POT CV	0	0	0	48	21,006	100	48	21,006
	TRW CP	11	2,092	6	35	31,608	94	46	33,700
	TRW CV	15	6,239	14	105	39,975	86	120	46,214
Total		52	11,497	5	258	207,287	95	310	218,785
2013	HAL CP	4	909	1	30	104,755	99	34	105,664
	HAL CV	11	6	1	31	1,032	99	42	1,038
	JIG	0	0	0	16	15	100	16	15
	POT CP	0	0	0	3	6,317	100	3	6,317
	POT CV	0	0	0	52	20,836	100	52	20,836
	TRW CP	11	1,107	3	34	36,656	97	45	37,763
	TRW CV	10	5,097	12	101	38,299	88	111	43,396
Total		36	7,119	3	267	207,910	97	303	215,029
2014	HAL CP	1	*	*	29	*	*	30	57,780
	HAL CV	10	*	*	21	*	*	14	1,889
	POT CP	0	0	0	4	5,477	320	4	1,711
	POT CV	0	0	0	46	21,406	137	43	15,623
	TRW CP	10	1,285	6	34	30,459	146	44	20,828
	TRW CV	9	4,270	11	98	37,607	94	104	39,988
Total		30	5,561	4	234	202,709	147	239	137,819
2015**	HAL CP	3	*	*	28	52,187	90	30	57,780
	HAL CV	2	*	*	8	*	*	14	1,889
	POT CP	0	0	0	4	*	*	4	1,711
	POT CV	0	0	0	32	15,282	98	43	15,623
	TRW CP	10	1,454	7	34	18,885	91	44	20,828
	TRW CV	7	2,696	7	98	29,577	74	104	39,988
Total**		22	6,521	5	205	118,598	86	239	137,819

Source: AKFIN, June 26, 2015.

Table orginates from pivot file BSAI_PCOD_SECTOR(06-26)

* Denotes confidentiality

** 2015 data as of June 26, 2015

From 2003 through June 26, 2015, the majority of all the sectors' harvest of Pacific cod has been from the BS, but there continue to be several sectors with notable portions of catch in the AI. The trawl CV and trawl CP sectors were the most active of all the sectors in the AI. The trawl CV sector retained the most AI Pacific cod in terms of metric tons and percentage during the thirteen year period; 7 percent to 51 percent of their BSAI Pacific cod allocation was harvested in the AI with an overall average of 27 percent. The trawl CP sector, second to the trawl CV sector, harvested from 3 percent to 42 percent of their combined BSAI Pacific cod from the AI and had an overall average of 19 percent over the thirteen year period. As noted in Figure 3, AI harvest as a percent of each sector's combined BSAI Pacific cod harvest has diminished significantly. However, looking at these two sectors in relation to total AI Pacific cod harvested, the trawl CV sector has generally increased their share of the AI Pacific cod harvest since 2006, harvesting 70 percent of the AI Pacific cod in 2014, while the trawl CP share of the AI Pacific cod has generally diminished their share since 2005, harvesting between a low of 14 percent in 2011and a high of 23 percent in 2014 (Figure 4).

One likely explanation for the shift in harvest of AI Pacific cod from trawl CP to trawl CV sectors was the implementation of Amendment 85 and Amendment 80 in 2008. Prior to implementation of Amendment 85, trawl sectors were allocated 47 percent of the BSAI Pacific cod, which was split 50 percent each for trawl CPs and CVs for a 23.5 percent allocation between these two sectors. Upon implementation of Amendment 85 in 2008, the BSAI Pacific cod allocation was reduced to 13.4 percent for Amendment 80 vessels, 2.3 percent for AFA CPs, and 22.1 percent for the trawl CV sector. Amendment 80 provided an allocation of the TACs for six groundfish species, including Pacific cod, to facilitate the development of cooperative arrangements among the eligible vessels, thus allowing opportunities for consolidation within the Amendment 80 sector and allowing for increased participation by the Amendment 80 vessels in non-rationalized fisheries like AI Pacific cod.

With the reduction in BSAI Pacific cod allocation for the trawl CP sectors and the implementation of Amendment 80, both Amendment 80 and AFA CP sectors changed how they utilized their allocation of BSAI Pacific cod. Instead of balancing their allocation between directed fishing and incidental catch, they now utilize their allocation of BSAI Pacific cod primarily for incidental catch in their other fisheries. At that same time, some trawl CPs with access to trawl CVs expanded their mothership activity in the AI Pacific cod fishery to help offset the loss of revenue from the reduced BSAI Pacific cod allocation. This shift in processing behavior for some trawl CPs active in the AI Pacific cod fishery is apparent in Table 2-32 and Table 2-33.

The hook-and-line sectors are the only other sectors that have consistently participated in the AI Pacific cod fishery on annual basis since 2003. The hook-and-line CP sector had a much lower total annual harvest and allocation than the trawl CV or CP sectors, but until 2014, typically harvested some portion of its BSAI Pacific cod in the AI. The hook-and-line CP sector has harvested from 1 percent to 6 percent of their combined BSAI Pacific cod from the AI during the twelve year period, for an average of 3 percent. In 2014, only one hook-and-line CP vessel harvested AI Pacific cod prior to the fishery closing on March 16, while in 2015, three hook-and-line CPs harvested AI Pacific cod starting the first week in January.

The last sector that has routinely harvested AI Pacific cod on an annual basis is the hook-and-line CV sector. During 2003 through July 15, 2014, the hook-and-line CV sector harvest of the AI Pacific cod ranged from 1 percent to 15 percent, for an average over the twelve year period of 6 percent. In 2014, three hook-and-line CVs participated in the AI Pacific cod fishery harvesting 2 mt prior to its closing on March 16, which was less than 1 percent of the sector's BSAI Pacific cod catch.

The remaining sectors, pot CP, pot CV, and jig, have not consistently participated in the AI Pacific cod fishery on an annual basis. The pot CP participated from 2003 through 2010, the pot CV sector participated from 2006 through 2008, and the jig sector participated in 2003 and 2005 through 2008.

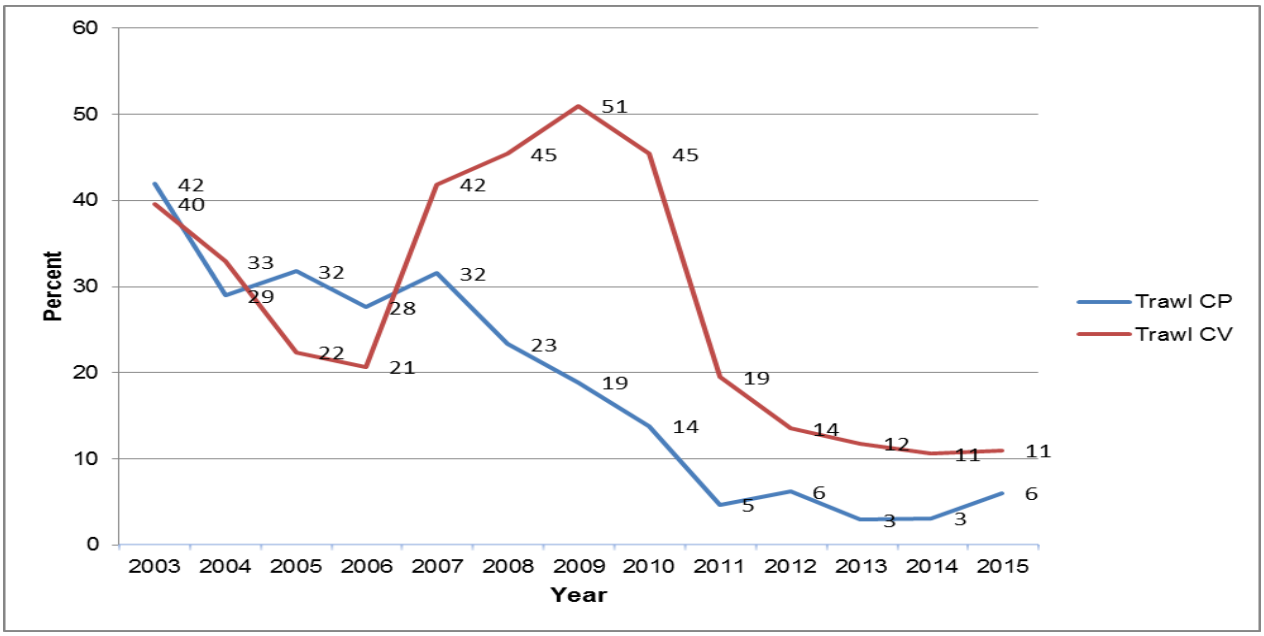


Figure 3 **Annual percent of AI Pacific cod harvest relative to the sector's combined BSAI Pacific cod harvest for trawl CP and trawl CV, 2003 through June 26, 2015**

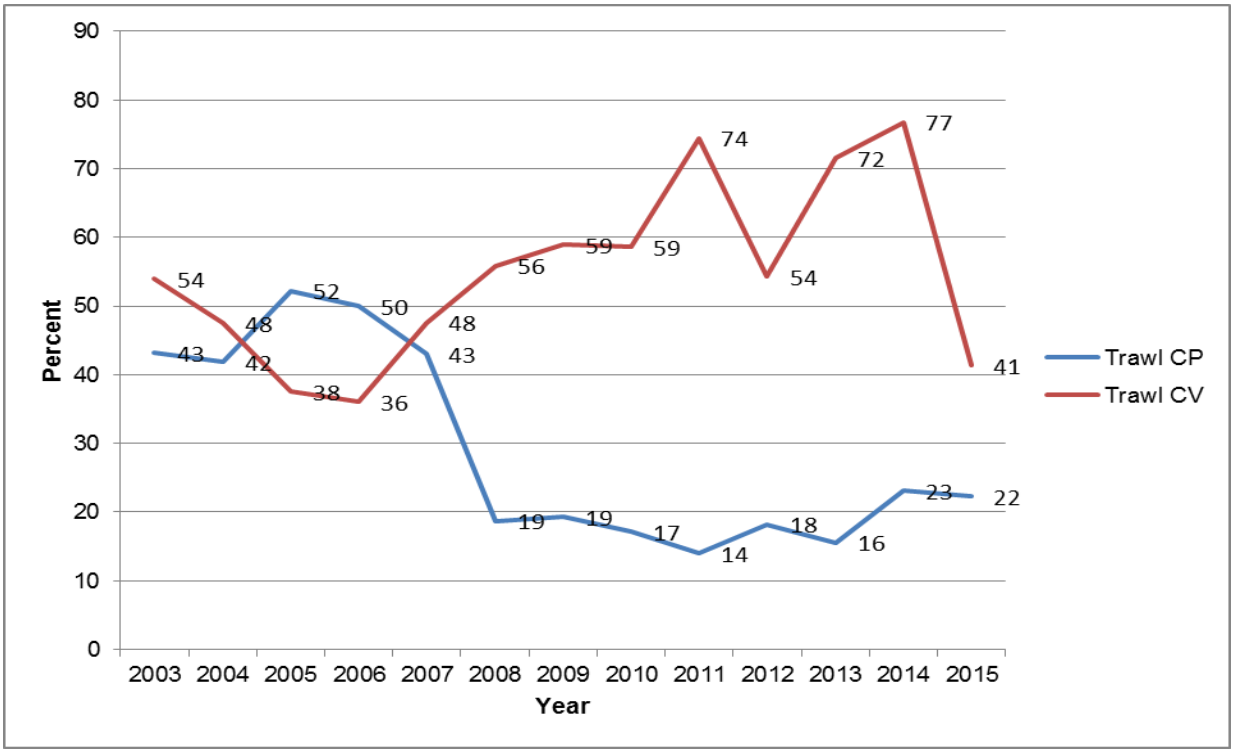


Figure 4 **Annual percent of AI Pacific cod harvest by trawl CP and trawl CV sectors relative to total harvest of AI Pacific cod, 2003 through June 26, 2015**

Timing of the AI Pacific cod fishery in relation to the BS Pacific cod fishery has differed slightly over the last several years. As noted in Figure 5, during 2010 through June 26, 2015, the Pacific cod fishery in the

BS starts in earnest following the January 20 opener with a usual peak in fishing around mid-February followed by a slow decline in fishing effort during March and April. In the AI Pacific cod fishery, fishing effort tends to ramp up during the last couple of weeks in February with a peak in fishing effort around mid-March, followed by a dramatic declined in fishing effort over the next couple of weeks (Figure 6). One noticeable change in the timing of the 2015 AI Pacific cod fishery was that the hook-and-line CP sector, utilizing their ability to get an early start on the AI Pacific cod fishery, jumped into the fishery during the first through third week of the year, which was slightly ahead of the trawlers.

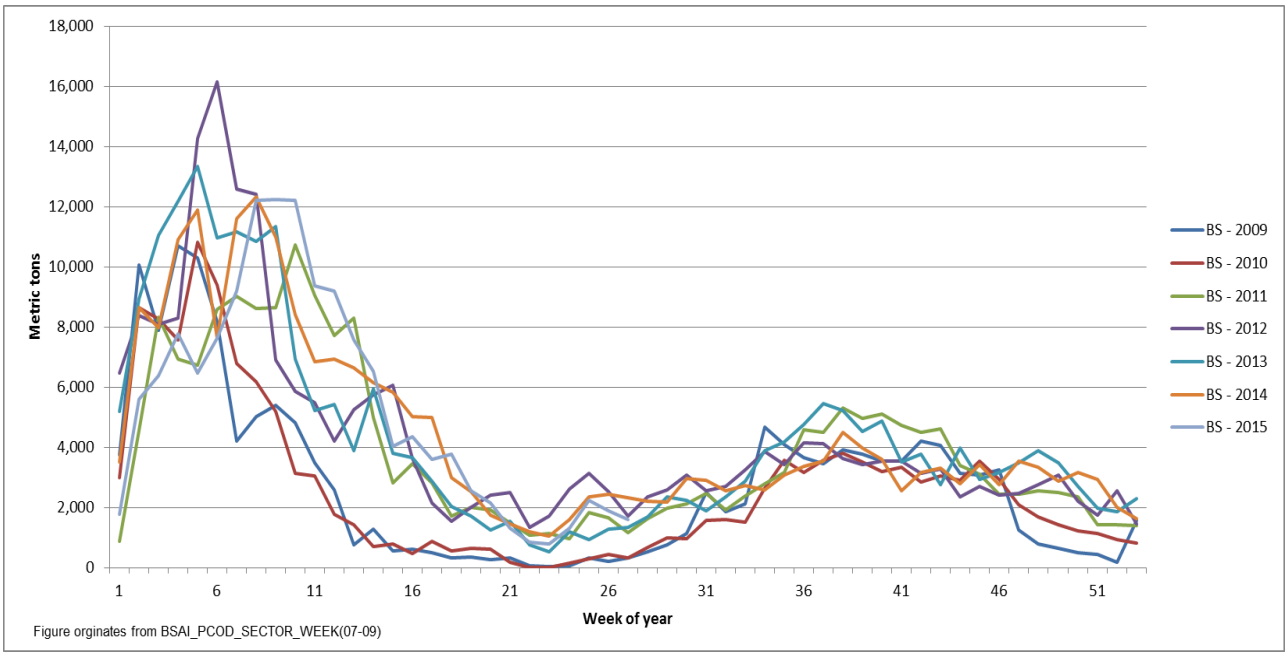


Figure 5 Total retained harvest of Bering Sea Pacific cod by week, 2010 through June 2015

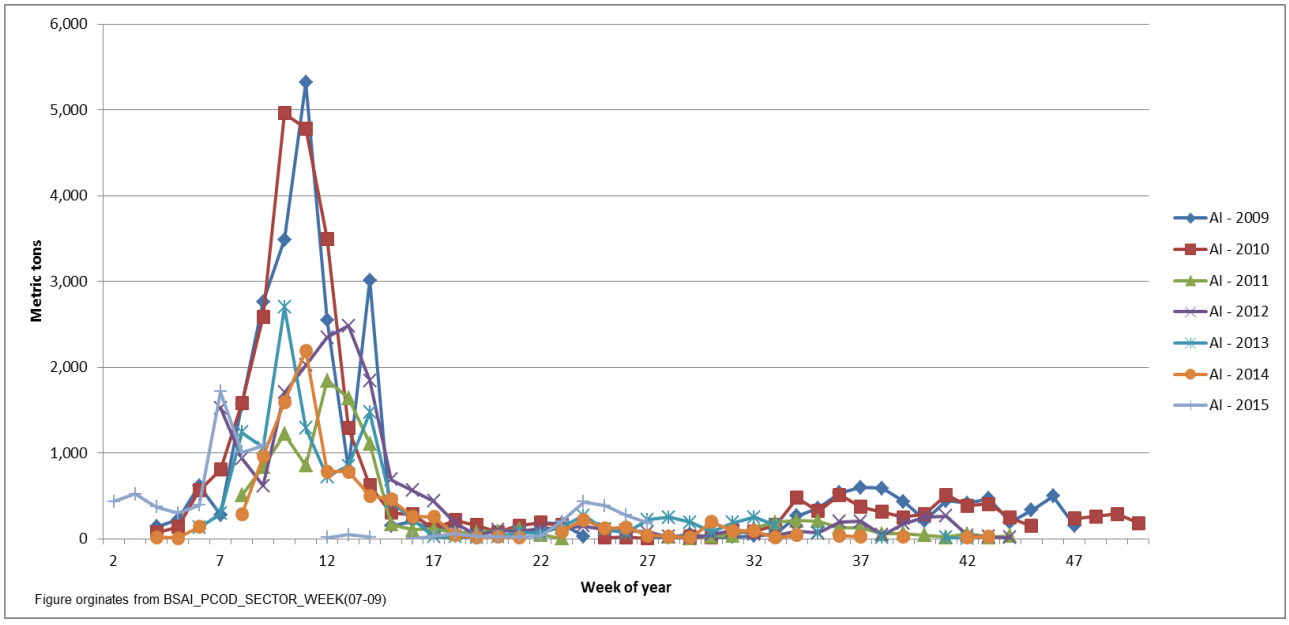


Figure 6 Total retained harvest of Aleutian Islands Pacific cod by week, 2010 through June 2015

Figure 7 and Figure 8 provide average weekly harvest of BS and AI Pacific cod for the trawl CV sector for two periods, 2008 through 2010 and 2011 through June 2015. As seen from the figures, the catch of BS A season Pacific cod for the trawl CV sector tended to start later during 2008 through 2010, while during the 2011 through 2015 period, the start of the fishery has shifted several weeks earlier. One of the factors attributing to the late start of the AI Pacific cod fishery relative the BS Pacific cod fishery is due to Pacific cod aggregating in the Aleutian Islands during this time period, which allows efficient harvest by trawl vessels. Catch of Pacific cod outside of that time period is mostly incidental catch in other fisheries. Fishermen have indicated that it is hard to find aggregations of Pacific cod in sufficient amounts to warrant trawling after mid-April.

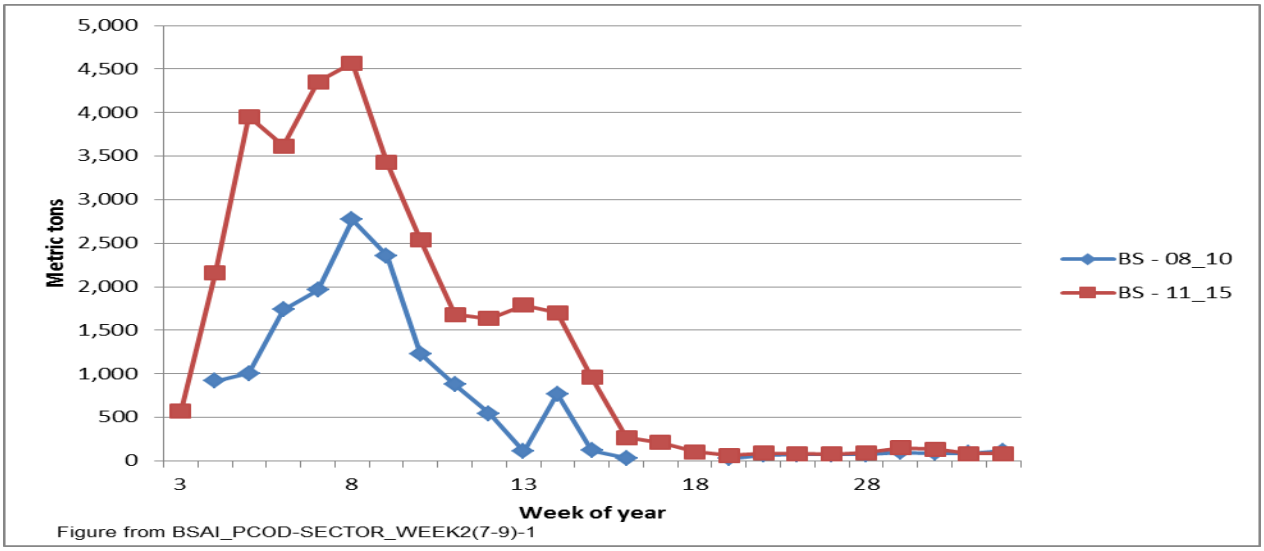


Figure 7 **Average retained harvest of Bering Sea Pacific cod by week for the trawl CV sector, 2008 through 2010, and 2011 through June 2015**

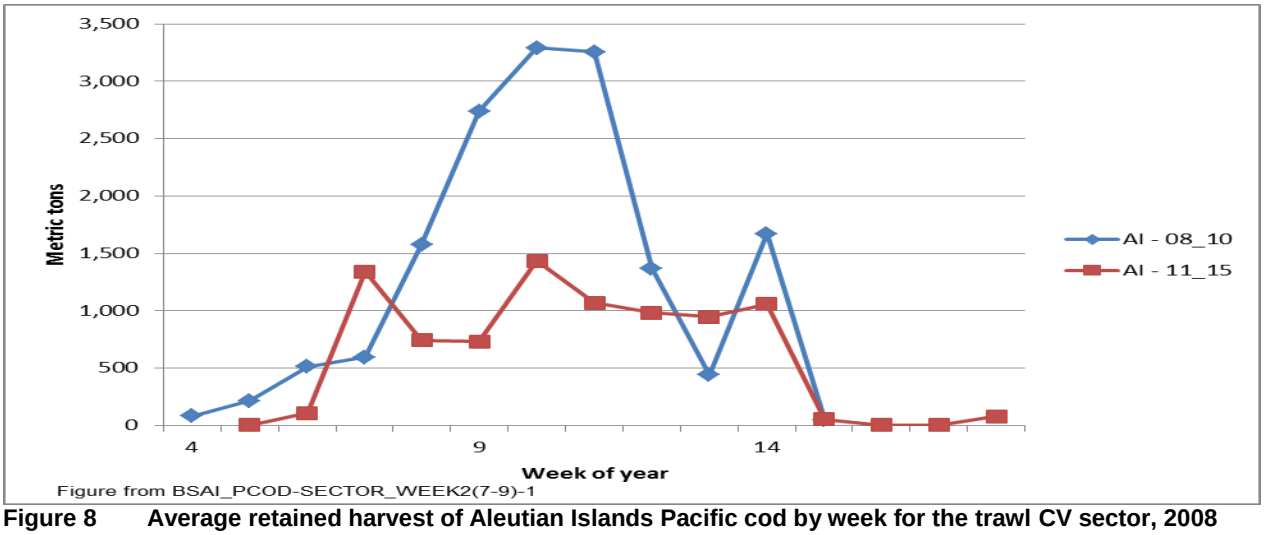


Figure 8 **Average retained harvest of Aleutian Islands Pacific cod by week for the trawl CV sector, 2008 through 2010, and 2011 through June 2015**

Table 2-31, provides the annual date of the A season closure of BSAI Pacific cod fishery for the trawl CV sector and the date of the AI Pacific cod fishery. As seen from the table, the trawl CV sector has been restricted to bycatch-only retention status in their A season BSAI Pacific cod fishery every year from 2004 through 2013. During seven of those years, the trawl CV sector was on bycatch-only status before

March 15. The earliest closure for the trawl CV sector was February 27 in 2012, while the latest closure, prior the normal end of the A season, was March 26 in 2011. In 2014 and 2015, the first two years Pacific cod was managed at the AI level, the AI Pacific cod fishery closed to directed fishing before the A season trawl CV sector allocation for BSAI Pacific cod was exhausted.

Table 2-31 Closure date for the A season BSAI Pacific cod trawl CV sector allocation and area closure for the A season AI Pacific cod fishery

Year	Sector closure date for Pacific cod A season trawl CV	Area closure date for A season AI Pacific cod
2003	Never closed	N/A
2004	23-Mar	N/A
2005	13-Mar	N/A
2006	8-Mar	N/A
2007	12-Mar	N/A
2008	6-Mar	N/A
2009	21-Mar	N/A
2010	12-Mar	N/A
2011	26-Mar	N/A
2012	27-Feb	N/A
2013	11-Mar	N/A
2014	Never closed	16-Mar
2015	Never closed	27-Feb
Table orginates from Oct 14 Initial Review AI Pcod Allocation Tables		

2.7.1.2 Distribution of AI Pacific cod processing

This section summarizes Pacific cod processing history in the AI from 2003 through July 2014. Historically, a portion of the BSAI Pacific cod ITAC allocated to CVs has been harvested in the AI and processed onshore. A portion of this AI harvest has also typically been processed offshore, by motherships, floating processors, or CPs acting as motherships. Included in Table 2-32 are annual metric tons of AI Pacific cod processed offshore, Adak and Atka processing plants for both the federal fishery and the GHL fishery, and all other shoreplant processing to include Akutan, Dutch Harbor, and other Alaska communities, from 2003 through June 2015. Annual GHL totals were not included in the offshore sector and all shoreplant processing sector columns of Table 2-32 since the limited number of offshore and other shoreplant participants prevented analysts from separating the two groups from each other without divulging confidential data.

Looking at the offshore sector first, the proportion of processing of AI Pacific cod 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, CV deliveries of AI Pacific cod to CPs played a more prominent role in the offshore processing of AI Pacific cod. A large share of the total offshore processing of AI Pacific cod was from incidental catch, which ranged from a low of 888 mt in 2013 to a high of 1,949 mt in 2004 since trawl CPs tend fish in multiple fisheries. Incidental catch for shoreplant processing, however, was minor when compared to their directed harvest of AI Pacific cod since trawl CVs tend not to fish in other groundfish fisheries in the AI. Other shoreplant processing of AI Pacific cod was generally less than one percent of the total AI Pacific cod processed during 2003 through 2015.

Amongst 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 2-33**,** 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.

Looking at the portion of AI Pacific cod processed by shoreplants, there are currently two shoreplants in the AI management area, Adak and Atka. Of these two plants, Adak is the predominate plant for processing of AI Pacific cod (see Table 2-25). Other shoreplants outside the AI management area have generally processed less than one percent of the total AI Pacific cod during 2003 through 2015. Looking at Table 2-32, the AI shoreplants processing activity for AI Pacific cod has ranged from a low of 0 percent in 2011 and 2015 to a high of 49 percent in 2013. In addition to the AI Pacific cod processing activity from the Federal fishery, the AI shoreplants also processed AI Pacific cod from the GHL fishery. During the 2006 through 2014 period, 33 percent of the total AI Pacific cod processed by the AI shoreplants was from the GHL fishery. As a percent of the total BSAI Pacific cod processed, the AI shoreplants processed between 3 percent and six percent during 2003 through 2009, but since 2010, AI shoreplants have processed significantly less ranging from zero percent to two percent. Some of the recent decline in processed AI processed cod by AI shoreplants is likely due to the reduction in AI Pacific cod biomass and the Pacific cod TAC split, but changes in fishing behavior by the offshore sector, starting in 2008, could also have contributed to the decline in processed AI Pacific cod.

In 2008, both Amendment 80 and Amendment 85 were implemented. Amendment 80 provided an allocation of the TACs for six groundfish species, including Pacific cod, to facilitate the development of cooperative arrangements among the eligible non-pelagic trawl CPs, thus allowing opportunities for consolidation within the Amendment 80 sector and allowing for increased processing participation by the sector in non-rationalized fisheries like AI Pacific cod. Amendment 85 reduced the allocation of BSAI Pacific cod to trawl sectors from 47 percent to 37.8 percent. Amendment 85 also further apportioned the BSAI Pacific cod allocation amongst the different trawl sectors. Of the 37.8 percent BSAI Pacific cod allocated to the trawl sectors, Amendment 80 CPs are apportioned 13.4 percent, AFA CPs are apportioned 2.3 percent, and trawl CVs are apportioned 22.1 percent.

As a result of the implementation of Amendment 80 and Amendment 85 in 2008, the fishing behavior for the trawl sectors appears to have changed. Information in Table 2-33 indicates that prior to 2008, a majority of the AI Pacific cod processed by the offshore sector came from CP harvest, but after 2008, CV deliveries of AI Pacific cod to CPs played a more significant role in the offshore processing of these vessels. Prior to 2008, on average 69 percent of the total CV deliveries of AI Pacific cod went to shoreplants, while 31 percent was delivered to offshore vessels. Since 2008, 34 percent of total CV AI Pacific cod was delivered to shoreplants, and 66 percent was delivered to offshore vessels. The flexibility of the Amendment 80 program combined with the flexibility of other rationalization programs implemented prior to Amendment 80 likely afforded the offshore sector the ability to change their fishing behavior in the AI Pacific cod fishery to lessen the impacts of Amendment 85, a lower AI Pacific cod biomass, and the BSAI Pacific cod TAC split. When compared to the offshore sector, the AI shoreplants have little ability to change their behavior to reduce the impacts resulting from a lower AI Pacific cod biomass and the BSAI Pacific cod TAC split, since the AI shoreplants rely 100 percent on CV deliveries of AI Pacific cod to their plant. This disparity in flexibility between the offshore sector and AI shoreplants leaves the AI shoreplants at a significant disadvantage in adapting to changes in the AI Pacific cod fishery.

Table 2-32 Amount of AI Pacific cod processed offshore, onshore at the Adak and Atka plants, and all other and other shoreplants to include Dutch Harbor, Akutan, and other Alaska communities, 2003 through June 26, 2015

Year	At-sea processing								Adak and Atka shoreside processing					Other shorebased processing			Total AI Pacific cod processed (mt)			Total BSAI Pacific cod processed (mt)
										Federal										
	Target (mt)	% of AI	% from CP harvest	% from CV delivered	Incidental (mt)	Total (mt)	% of total AI	% of BSAI	Target (mt)	% of AI	% of BSAI	GHL (mt)	Total (mt)	mt	% of AI	% of BSAI	Taget (mt)	Incidental (mt)	Total (mt)	
2003	20,969	70	61	39	1,850	22,819	72	12	8,716	27	5	0	8,716	324	1.0	0.2	29,966	1,892	31,859	190,365
2004	16,981	65	76	24	1,949	18,930	67	10	9,282	33	5	0	9,282	75	0.3	0.0	26,295	1,992	28,287	194,172
2005	12,938	67	88	12	1,790	14,728	69	8	6,440	30	3	0	6,440	46	0.2	0.0	19,410	1,804	21,214	187,542
2006	13,038	73	82	18	1,217	14,255	74	8	4,763	25	3	926	5,689	120	0.6	0.1	17,904	1,234	19,138	172,658
2007	15,930	61	80	20	1,584	17,514	63	11	10,000	36	6	2,586	12,586	164	0.6	0.1	26,071	1,606	27,678	155,298
2008	19,314	80	50	50	928	20,242	81	14	4,679	19	3	1,318	5,997	91	0.4	0.1	24,020	992	25,012	146,881
2009	15,380	65	56	44	1,792	17,172	67	11	8,268	32	5	351	8,619	10	0.0	0.0	23,630	1,820	25,449	153,335
2010	19,956	99	38	62	1,448	21,404	99	15	177	1	0	30	207	121	0.6	0.1	20,240	1,462	21,702	147,359
2011	8,764	100	12	88	1,564	10,327	100	5	39	0	0	14	53	12	0.1	0.0	8,783	1,595	10,378	194,876
2012	7,130	69	57	43	1,159	8,288	72	4	3,166	28	1	4,317	7,483	43	0.4	0.0	10,313	1,184	11,497	218,785
2013	2,715	44	42	58	888	3,602	51	2	3,511	49	2	4,777	8,288	6	0.1	0.0	6,225	894	7,119	215,029
2014	1,944	44	8	92	1,136	3,080	55	2	2,477	45	1	4,099	6,576	4	0.1	0.0	4,421	1,139	5,561	208,270
2015	5,479	100	51	49	1,420	6,899	100	6	0	0	0	0	0	0	0.0	0.0	5,479	1,427	6,906	125,120

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 2-33 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 June 26, 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, July 7, 2015

Table orginates from pivot file CV_BSAI_PCOD_SECTOR(07-07)

2.7.2 Alternative 2: CV fishery with delivery requirement

Alternative 2 would prioritize the directed AI Pacific cod fishery (TAC minus CDQ and ICA) for CVs and require delivery of the AI Pacific cod to shoreplants in the AI management area until (option: March 1, March 7, or March 15), at which point the fishery would open to all vessels with available BSAI Pacific cod sector allocation and the appropriate endorsements on their LLP licenses to fish in the AI Pacific cod fishery. The alternative would also limit the amount of A season BS Pacific cod that could be harvested by trawl CV sector prior to a Council selected date of March 1, March 15 or March 21.

The proposed alternative includes five options that are intended to limit unharvested non-CDQ AI Pacific cod TAC. The first option changes the approach used in Alternative 2 from a CV only fishery to a set-aside for CVs for delivery to AI shoreplants. Under that option, any portion of AI Pacific cod non-CDQ TAC over the CV set-aside would be made available to any sector for deliveries to any processor. The second option removes the delivery requirement to shoreplants west of 170 degrees longitude in the AI if less than 50 percent of the AI Pacific cod non-CDQ TAC has been landed by specific date, of which there are three options, February 28, March 7 or March 15. The third option would suspend the delivery requirement to AI shoreplants for the remainder of the year if less than 1,000 mt of AI Pacific cod of the non-CDQ TAC has been landed by February 21 or 28. The fourth option would suspend the delivery requirement to AI shoreplants for the year if prior to a specific date neither the city of Adak nor the city of Atka has notified NMFS of the intent of a local processor in the community to process Pacific cod in the upcoming season. Council included November 1 or December 15 as options for the specific date the communities must notify NFMS of the intent process Pacific cod. Cities can voluntarily provide notice prior to the selected date if they do not intend to process AI Pacific cod. Finally, the fifth option would exempt any processor from the delivery restrictions for processing levels up to 2,000 mt if the vessels have processed Pacific cod in the AI management area in at least 12 years between 2000 and 2014.

By design, Alternative 2 would preclude the future participation of other participants that may currently benefit or have historically benefitted from the processing of AI Pacific cod unless AI shoreplants are unable to process the AI Pacific cod received from catcher vessels. Section 303a(c)(5)(B)(i) of the Magnuson-Stevens Act authorizes councils and NMFS to establish regional or port-specific landing or delivery requirements in developing limited access privilege programs (LAPPs). However, Alternative 2 is not a LAPP at this time. The Council and NMFS have allocated fishery resources between inshore and offshore participants in the past, consistent with the purpose and need for the action, the National Standards and other provisions of the MSA.

Consideration of community impacts are requirements of the MSA and National Standards that should be considered by the Council for the proposed action. National Standard 8 (§ 301(a)(8) of the MSA) requires that conservation and management measures in fishery management plans "shall, consistent with the conservation requirements of this Act, take into account the importance of fishery resources to fishing communities in order to (1) provide for the sustained participation of such communities, and (2) to the extent practicable, minimize adverse economic impacts on such communities." Section § 303(a)(9) of the MSA requires that fishing communities be considered in the development of the fishery impact statement. The MSA defines fishing community as a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew, and U.S. fish processors that are based in such fishing communities. Based on that definition of fishing community, it is clear that Adak and Atka meet the definition of fishing community, since they both are heavily dependent on fishery resources and are heavily engaged in processing of fishery resources and, therefore, the Council has the authority to provide for the sustained participation of the AI communities and for Adak to minimize the adverse economic impacts on the AI communities from the rationalized fisheries through diminished historical share of the AI Pacific cod fishery.

As noted in the article "Protecting Community Interests," there is balance between the different National Standards. Although National Standard 8 recognizes the importance of fishery resources to fishing communities and requires the Council to consider community impacts, there is a fundamental question of how to balance the requirements of this standard with other National Standards in the MSA. Thus, it is fairly clear that measures to protect community interests must remain consistent with the overall conservation goal of fisheries management in National Standard 1 to "prevent overfishing, while achieving, on a continuing basis, the optimum yield from each fishery for the U.S. fishing industry" (MSA 301(a)(1)). In effect, if a core conservation measure is necessary, it follows that community interests are of secondary priority.

National Standard 4 states that measures to protect community interests must also "not discriminate between residents of different states" (MSA 301(a)(4)). If it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, National Standard 4 states that such allocations shall be (A) fair and equitable to all such fishermen, (B) reasonable calculated to promote conservation, and (C) carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges. Note that National Standard 4 only addresses fishing privileges and does not address processing privileges.

As to the remaining national standards, greater ambiguity exists when balancing one against another, as there is no explicit hierarchy to their importance. Requirements that the Council consider efficiency in the utilization of fishery resources, as stated in National Standard 5, for example, may or may not take precedence over the consideration of community interests under National Standard 8. In this example, the proposed action could be a potential barrier to efficient business and financial decision-making; thus, the action could make the AI Pacific cod fishery less economically efficient. In the end, the Council must balance National Standard 8 with other National Standards, particularly when there is inherent tension among specific standards and the proposed conservation or management measure at issue is intended to serve multiple purposes.

2.7.2.1 CV fishery

Under this alternative, the directed AI Pacific cod fishery (TAC minus CDQ and ICA) would be reserved for CVs delivering to shoreplants west of 170° longitude until March 1, March 7 or March 15 (Council options discussed in 2.7.2.3). The CDQ AI Pacific cod allocation and the ICA reserved for incidental catch of AI Pacific cod in other groundfish fisheries, primarily to support the offshore sectors, are not affected by this action.

Since the AI Pacific cod fishery would be reserved for only CVs delivering to shoreplants in the AI management area, and the trawl CV sector has been the most active in the AI Pacific cod fishery among all of the CV sectors, this harvest sector will likely benefit the most from the proposed exclusivity of the AI Pacific cod fishery. This conclusion is based on the assumption that sufficient CV capacity will be available to fully exploit the proposed AI Pacific cod exclusivity. Since the AI currently has only one shoreplant that can process large amounts of AI Pacific cod, this assumption of sufficient CV capacity to harvest the AI Pacific cod set-aside is dependent on the operating status of the Adak shoreplant, whether the shoreplant is offering exvessel prices that can attract CV participation, and CVs will find the CV exclusivity economically appealing enough to incur the implicit costs associated with shore-based deliveries.

As noted by an industry representative[9] that has participated in both shoreplant and offshore deliveries, there are tradeoffs between the operational efficiency for shoreplant CV operation and offshore CV operation in the AI Pacific cod fishery. Currently CVs delivering to the Adak shoreplant fish from Atka to Petrel Bank, which can be a 12 hour transit from Adak. With the removal of the 2010 BiOp SSL restrictions this year, a significant amount of the AI CV harvest could shift to the south side of Adak Island and just east of Great Sitkin. This shift in fishing area will likely reduce the transit time to Adak to approximately 3 to 4 hours. When fishing within a few hours of the Adak shoreplant, CVs can transit and delivery their catch to Adak during the night and then return to the fishing grounds by morning. In addition, CVs delivering to the Adak shoreplant have an added advantage of not having to coordinate fishing operations with the offshore processor. Vessels can independently determine when to fish, where to fish, and how long to fish, which for offshore CVs is more choreographed. Shoreplant CVs often bleed their AI Pacific cod catch immediately, and then store their catch in refrigerated seawater for one to three days before delivering their AI Pacific cod to the Adak shoreplant. Offshore CVs will often shortwire their codends for several hours before the scheduled delivery, at which point it gets dumped into the holding tank of the offshore processors and gets processed over the next several hours. Immediate bleeding is an advantage for shoreplant operation, but shorter time to processing is an advantage for offshore operation.

Looking at historical AI Pacific cod catch in Table 2-33, Table 2-34, and Table 2-35 there is a long history of CV activity in the AI Pacific cod fishery. In Table 2-34, between 2003 and 2015, the trawl CV sector harvested on average 61 percent of the AI Pacific cod retained catch. During the same period, the number of CVs ranged from a low of 4 in 2015, to a high of 34 in 2007. Looking at exvessel gross revenue, the trawl CV sector averaged $7.2 million from AI Pacific cod during 2003 through 2014, which was 7.7 percent of their total exvessel gross revenue received from all fisheries (Table 2-35). Narrowing the focus, on average 29 trawl CVs delivered 4,800 mt of AI Pacific cod to AI shoreplants during the 2003 through 2015 period. Given the historical trawl CV sector's fishing patterns in the AI Pacific cod fishery, if the AI shoreplants are operational, those trawl CVs that do participate in the AI Pacific cod exclusive fishery would likely benefit from restricted access, while at the same time those vessels would likely provide sufficient catch capacity for the AI shoreplants. On the other hand, if the Adak shoreplant is not operational and Atka shoreplant is not yet operational, there likely will not be sufficient CV capacity to harvest any of the AI Pacific cod fishery without some ability for these CVs to deliver their catch to other shoreplants or offshore processors. If the Atka shoreplant is operational while the Adak shoreplant is not, there likely would be some trawl CV vessels participating in the AI Pacific cod fishery, but it is difficult to determine the extent of the participation since the Atka shoreplant has not processed AI Pacific cod.

The trawl CP sector and the trawl CVs delivering AI Pacific cod to these CP vessels ineligible to harvest AI Pacific cod during the designated time period in the A season would likely respond by fishing I the BS Pacific cod fishery in effort to offset the burden of the action, and minimize costs of the new restrictions. On average, this sector has harvested 22 percent of the directed AI Pacific cod during the 2003 through June 2015, with average first wholesale gross revenue through 2014 of $7.5 million (Table 2-34 and Table 2-35). During this period, the number of trawl CPs has remained relatively stable with a low of 1 vessel for a several years, to a high of 10 vessels in 2004 and 2007. Relative to the total first wholesale gross revenue from all fisheries for these vessels, the AI Pacific cod fishery contributed on average 4 percent. As for trawl CVs delivering to offshore processors, on average 13 vessels delivered 5,000 mt of AI Pacific cod during 2003 through 2015 (Table 2-33).

[9] Dave Fraser, November 24, 2014.

Similar to the catch patterns in the trawl CV sector, the amount of AI Pacific cod harvested by the trawl CP sector and the proportion of AI Pacific cod harvested has been trending downward since 2007. Table 2-11 shows harvest of AI Pacific cod peak for the trawl CP sector in 2007 at 11,899 mt, and has declined to a low of 648 mt in 2014. Likely the largest factor contributing to the decline in trawl CP harvest of AI Pacific cod is the change in sector allocations of BSAI Pacific cod in 2008, as noted in section 2.7.1.1. In addition, similar to the trawl CV sector, the downward trend of AI Pacific cod harvest is likely due in part to the 2011 Steller sea lion protection measures, Pacific cod TAC split starting in 2014, and lower AI Pacific cod biomass.

As for the hook-and-line CP sector, they would also be ineligible to harvest AI Pacific cod during the designated time period in the A season and would likely respond by fishing in the BS Pacific cod fishery. The hook-and-line CP sector's average annual percent of targeted AI Pacific cod harvested is 16 percent during 2003 through June 2015. During this period, the number of hook-and-line CPs has ranged from a low of zero in 2014, to a high of 10 in 2010, while harvest has ranged a low of zero mt in 2014, to high of 4,724 mt in 2009 (Table 2-34). The average first wholesale gross revenue from the AI Pacific cod fishery for the fixed gear CP sectors during this period was $4.2 million, which was 3.1 percent of their total first wholesale gross revenue from all fisheries (Table 2-35). The hook-and-line CP sector also experienced a decline in participation, harvest, and first wholesale gross revenue since its peak in the AI Pacific cod fishery. The downward trend in harvest and participation for the hook-and-line CPs are also likely due to declining biomass, the Pacific cod TAC split, and the previous Steller sea lion protection measures implemented in 2011.

Table 2-34 Targeted Pacific cod catch (mt) in the AI and the percent of total targeted catch in the AI for trawl CVs and CPs, and hook-and-line CPs, 2003 through 2015

Year	CV Trawl			CP Trawl			CP HAL			AI total targeted catch
	Vessels	Metric tons	%of AI	Vessels	Metric tons	%of AI	Vessels	Metric tons	%of AI	Metric tons
2003	32	17,201	57	9	11,924	40	7	836	3	29,966
2004	21	13,439	51	10	9,905	38	6	2,923	11	26,295
2005	16	7,973	41	8	9,303	48	4	2,114	11	19,410
2006	16	6,907	39	9	8,417	47	8	2,183	12	17,904
2007	33	13,122	50	10	10,389	40	5	2,235	9	26,071
2008	31	13,933	58	6	3,768	16	9	4,046	17	24,020
2009	26	14,880	63	5	3,256	14	7	4,724	20	23,630
2010	24	12,611	62	5	2,390	12	10	4,574	23	20,240
2011	14	7,493	85	1	*	*	5	1,135	13	8,783
2012	15	6,080	59	1	*	*	5	3,137	30	10,313
2013	7	5,027	81	2	*	*	3	909	15	6,225
2014	6	4,202	95	1	*	*	0	0	0	4,421
2015**	4	2,579	47	2	*	*	3	2,371	43	5,479
Average	19	9,650	61	5	4,740	22	6	2,399	16	17,135

Source: AKFIN, July 10, 2015.

Table orginates from pivot file BSAI_PCOD_SECTOR_TGT(07-10)

* Denotes confidentiality

** 2015 data as of July 10, 2015

Table 2-35 First wholesale gross revenue for trawl and fixed gear CPs and exvessel gross revenue for trawl CVs from targeted AI Pacific cod and total of all groundfish, 2003 through 2014

Year	Trawl CV			Trawl CP			Fixed gear CP		
	AI Pacific cod		Total exvessel gross revenue (millions of $)	AI Pacific cod		Total first wholesale gross revenue (millions of $)	AI Pacific cod		Total first wholesale gross revenue (millions of $)
	Exvessel Gross Revenue (millions of $)	% of total		First Wholesale Revenue (million of $)	% of total		First Wholesale Revenue (million of $)	% of total	
2003	13.6	15.7	86.7	13.8	10.6	130.6	1.0	1.0	101.2
2004	6.3	8.2	77.2	11.6	9.4	123.1	3.4	3.5	97.0
2005	4.2	4.9	87.3	12.9	7.9	164.5	2.9	2.3	128.3
2006	5.4	5.6	96.5	14.8	8.5	174.5	4.0	2.8	140.9
2007	12.6	12.6	99.6	21.3	11.7	181.9	4.9	3.4	141.4
2008	17.2	15.4	111.2	7.8	4.0	195.8	12.2	7.4	166.2
2009	7.7	9.7	79.3	4.1	2.3	177.0	6.9	6.1	113.2
2010	6.3	8.1	78.1	3.6	1.6	220.2	7.9	6.0	130.5
2011	4.6	4.2	108.9	*	*	311.4	1.9	1.1	167.3
2012	4.2	3.5	117.8	*	*	300.1	4.7	2.9	164.0
2013	2.6	2.6	99.1	*	*	226.9	1.1	0.9	125.2
2014	1.9	1.9	100.3	*	*	251.2	0.0	0.0	143.0
Average	7.2	7.7	95.2	7.5	4.7	204.8	4.2	3.1	134.9

Source: AKFIN, July 13, 2015.

Table orginates from pivot file AI_PCOD_DIV(07-13)

* Denotes confidential data

The harvest sectors ineligible to harvest AI Pacific cod during the designated time period in the A season would likely respond by fishing in the BS Pacific cod fishery, in an effort to offset the burden of the action, and minimize the costs of any new restrictions. However, whereas in earlier years there was a single Pacific cod TAC for the entire BSAI, from 2014 forward there will be separate Pacific cod TACs for the AI and for the BS. Because of this, if the BS TAC would otherwise have been fully harvested, a vessel shift from the AI to the BS as a result of this proposed action can only take place at the expense of other vessel's ability to harvest Pacific cod in the BS. Trawl CVs and CPs may be at a relative advantage to the hook-and-line CPs and pot CPs with respect to this, since a large proportion of their seasonal allocations of Pacific cod are harvested in the winter and spring, while large proportions of hook-and-line and pot CPs allocation are harvested in the summer and fall. Many trawl CPs and CVs are also part of the AFA or Amendment 80 programs, operating under a quota system that extends to Pacific cod, and this should provide a framework for structuring intra-sector harvesting and controlling competition. In addition, in a normal year, trawlers are unable to fully harvest their Pacific cod allocations, and some of the trawl gear allocations are reallocated to non-trawl sectors. If trawlers tended to harvest a larger portion of their BSAI allocations in the BS, because of being displaced from the AI Pacific cod fishery, reallocations to non-trawl sectors may change.

One factor that may limit the ability of displaced vessels in the future, particularly trawl CVs and CPs, from harvesting their AI Pacific cod in the BS is the halibut PSC rates. 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 CVs are 0.0013 in the AI and .014 in the BS, from 2004 through 2012. As a result, halibut PSC limits could potentially prevent trawl CVs and CPs that historically participated in the AI Pacific cod fishery from catching their BS B-season Pacific cod allocation, although these BS B-season halibut PSC limits have yet to be limiting. Unused amounts of B-season allocation of Pacific cod would be rolled into the C-season, and since the C-season allocation is rarely fully used by these sectors, a large amount of this may be reallocated to other sectors. It also follows that to the extent the proposed action results in more AI Pacific cod catch relative to the BS Pacific cod catch for the trawl CV sector, the benefits from that reduced halibut PSC from the trawl CV sector will help offset the increase in halibut PSC caught in the BS by displaced trawl CP sectors.

In addition, there are likely some disadvantages to these sectors from being prohibited from participating in the AI Pacific cod fishery, until a specified date, that make recuperating lost revenue more challenging. Vessels shifting their Pacific cod harvests from the AI to the BS may receive a lower price for Pacific cod in the BS compared to prices received in the AI, given the reported differences in fish size from observer data and anecdotal prices reported by the industry between the two areas. In addition, there are likely some economies of scale for some CP vessels that operate in the AI Pacific cod fishery, since they also participate in other AI fisheries. Revenue from AI Pacific cod helps defray operating costs while participating in other AI fisheries, so the lost revenue from the AI Pacific cod fishery could make it more costly for these offshore vessels and CVs that delivery to these vessels and shoreplants outside the AI management area, to participate in the few remaining AI fisheries.

Vessels displaced from the CV AI Pacific cod fishery have limited opportunities for redeployment into other BSAI or GOA groundfish fisheries, noting that these vessels are often subject to harvest sideboards in other fisheries as a result of their eligibility in a rationalization program. Of course vessels displaced from the AI Pacific cod fishery can continue to catch their remaining BSAI Pacific cod allocation in the BS. For Amendment 80 vessels, they can also increase their harvests of other Amendment 80 species, such as, Atka mackerel, Pacific ocean perch (in the AI), rock sole, yellowfin sole, and flathead sole. The opportunities to increase production in these fisheries are limited by the vessel or firm's unfished Amendment 80 quota share holdings, its ability to lease quota share from other Amendment 80 firms, to lease CDQ, or to acquire vessels with Amendment 80 quota attached. Another limiting factor is the availability of other allocated species that may be caught incidentally, and the viability of a market for those species. For AFA CPs and CVs, access to most BSAI flatfish species is precluded as a result of Amendment 80 allocations, and pollock is fully allocated under the provisions for the AFA. Access to species such as arrowtooth flounder, Greenland turbot, and Kamchatka flounder are precluded, because there is no halibut PSC allowance for those fisheries. Only a few trawl CVs rely solely on Pacific cod in the BS. Hook-and-line CPs can fish for halibut and sablefish, while pot CPs can fish for sablefish, but these are individual fishing quota species and would create few issues as vessels shift into these species will have to fish their own individual fishing quota. Potentially, the displaced hook-and-line vessels may increase fishing effort for Greenland turbot in the BSAI. This could increase conflicts with Amendment 80 vessels that also target Greenland turbot.

2.7.2.2 Shoreplant delivery requirement

The action alternative stipulates that prior to March 1, March 7 or March 15 (Council option that is discussed in 2.7.2.3), the AI Pacific cod harvested by CVs during the exclusive fishing period must be delivered to shoreplants west of 170 degrees longitude. Once that date has lapsed, the exclusive CV AI Pacific cod fishery would no longer apply, and AI Pacific cod catch can be delivered to offshore processors and shoreplants east of 170 degrees longitude.

Recognizing the absence of a shoreside processor definition in Federal regulations during initial review in October 2014, the Council defined shoreplant in its motion as a processing facility physically located on land. The language in the proposed alternative specifies that the AI Pacific cod be delivered to shoreplants in the AI management area, but a definition of shoreplant is not currently defined in Federal regulations. A definition does exist for shoreside processor in Federal regulations. In § 679.2, a shoreside processor is defined as any person or vessel that receives, purchases, or arranges to purchase unprocessed groundfish, except CPs, motherships, buying stations, restaurants, or persons receiving groundfish for personal consumption or bait. The Federal definition of a shoreside processor does not specifically exclude a stationary floating processor, which is defined as a vessel of the U.S., operating as a processor in Alaska State waters that remains anchored or otherwise remains stationary in a single geographic location while receiving or processing groundfish harvested in the GOA or BSAI. Given the definition of shore-based processor does not exclude stationary floating processors that remain in single geographic location, this

definition appears to be at odds with Council's intent of this proposed action, which is to limit deliveries of AI Pacific cod set-aside to fishing processing plants that are located inland of the ocean.

As outlined in the Council discussion concerning the action alternative in February 2014, the intent of the CV exclusive fishing period and landing requirement is to provide some stability to these shoreplants and the communities in which they reside. In the past, Pacific cod deliveries to the Adak shoreplant, one of two shoreplants currently in the AI, often ranged from 6,000 mt, to over 9,000 mt. Starting in 2014, the AI TAC is now set separately and relatively low, which could increase the risk of processing vessels with excess capacity closing the AI to Pacific cod in record time and eroding the historical share of the Adak shoreplant is greater. The requirement to deliver the AI Pacific cod to shoreplants in the AI management area could provide some stability to these shoreplants and the communities they reside. As noted in recent article in Marine Policy, increased harvesting opportunities can provide a means for communities to increase the size and diversification of their fishery portfolio (Sethi et al. 2014). The article states that commercial fisheries can be, by their nature, sporadic in their ability to provide a reliable economic engine for the community, due to the variable market conditions, fluctuating catches and stocks, changes in fishery regulations, and environment changes. As a result, communities that are more heavily dependent on commercial fisheries, like Adak and Atka, can suffer a higher degree of economic loss from unpredictable fishery conditions. Reducing the risk to communities might include diversification into many different fisheries or investing in harvesting and processing opportunities. However, in the case of Adak, their ability to reduce their exposure to volatile fishery conditions is likely limited, due to the community's proximity to commercial fisheries. There are very few fisheries in and around Adak that are sufficient enough in quantity and value to reduce their economic risk from volatile fishery conditions.

Adak and Atka are currently the only AI communities with the potential for AI shore-based processing facility at this time. These are likely the primary communities that will benefit from a regionalized delivery requirement. Implicit in the statement of benefits for AI communities is the assumption that processing AI Pacific cod at AI shoreplants is economically viable. However, processing margins at AI shoreplants may be smaller than elsewhere, given their remote location. As an example, at least one operator went bankrupt trying to operate in Adak. Another company that operated the Adak processing facility for only two years cited concerns about the health of the region's Pacific cod resource and increased regulatory uncertainty. Most recently, the Adak Cod Cooperative, which started in 2014, stopped operating after four months. At this point in time, the facility is still in need of an operator that can process Pacific cod and thus the shoreplant did not process AI Pacific cod during the 2015 fishing season. Nevertheless, if the proposed action is successful in stabilizing AI communities, Adak and Atka are likely the two communities that would directly benefit from the proposed action.

Looking first at Adak, the dependency on the shore-based processing of Pacific cod from the AI would likely result in more consistent opportunity for community-level economic activity from the proposed action relative to the status quo alternative. The Adak community is small and remote, with few alternative options for generating a viable and sustainable local economy. The U.S. Census reported there were 326 residents in April 2010. Commercial fisheries are crucial to the community. On average, the shoreplant, when operating, processed 6,130 mt per year during 2003 through 2014, with the largest amount in 2007 at 10,000 mt. The exvessel value paid to the CVs delivering AI Pacific cod to Adak shoreplant reached $12.5 million in 2007, with an annual average of $4.7 million from 2003 through 2014 (see Table 2-36). Looking at the resulting first wholesale value of AI Pacific cod, the high was $21.2 million in 2007, with an annual average of $9.2 million from 2003 through 2014 (see Table 2-36). Relative to total wholesale gross revenue from all processing, AI Pacific cod from the federal fishery on average, from 2003 through 2014, was 43 percent. Assuming the Adak shoreplant continues to operate and the world market prices for Pacific cod remain at their current level or increase, the proposed action would likely provide opportunities for continued deliveries of AI Pacific cod to the Adak shoreplant,

which could provide valuable consistent revenue for Adak community from fish taxes, and generate consistent economic activity (both directed and indirect) from processing AI Pacific cod at the Adak shoreplant.

Port visits to Adak, associated with Pacific cod fishing by both CPs and CVs, may create demand for goods and services in the community. Vessel services may include support for crew rotations, fuel supplies, and emergency medical services at the local clinic. The local fuel distributor has indicated that the large volume of fuel sold to fishing vessels allows the firm to sell fuel to residential and commercial customers in Adak at lower prices than it otherwise would be able to. However, any increase in economic activity in Adak as a result of increased CV port visits will likely be offset to some degree by a decrease in economic activity in the Adak community from a reduction in CP port visits.

Because of Adak's small size, its residents must import a large proportion of the goods they consume. Moreover, a large part of the processor work force is made up of temporary workers who come to town for the season and who leave when it is over. They spend money in the town while they are there, but a large part of their income would be spent elsewhere. Other sources of personal income and inducted impact may be so limited, however, that induced impacts (sales at the local grocery store for home consumption, for example) may have importance. Adak shares in the State's fisheries business tax revenues and its fishery resource landing tax revenues and any changes in landings or offloads in the municipal limits, or in the unorganized borough (Aleutian West census area) are likely to impact Adak city revenues.

Looking at the community of Atka, fishing vessels from Atka have primarily targeted halibut and sablefish, and not Pacific cod. Atka has not been an important logistical support base and is not impacted by transfers of AI Pacific cod to CPs or tramp steamers. In the past, Atka Pride Seafoods did not take deliveries of, or process, Pacific cod since they did not have an operational Pacific cod processing line. However, the plant began to take Pacific cod for processing in the summer of 2012, and plans to add a Pacific cod processing line in order to expand production of Pacific cod in the future. Any increase in the deliveries of, or processing of Pacific cod at the Atka Pride Seafood plant as a result of the proposed action would likely benefit the community through increased economic activity. In addition, increased deliveries of, and processing of AI Pacific cod may lead to similar changes in port visits by trawl and non-trawl CVs. Atka shares in the State's fisheries business tax and fishery resource landing tax revenues, and increase in these revenues is likely from increased deliveries of AI Pacific cod to Atka. Atka has a 2 percent raw fish tax, and an increase in Pacific cod deliveries may create new revenues for the community.

Assuming the Atka shoreplant is operational with regards to their AI Pacific cod goal (see section 2.6.8), one issue that could limit the economic activity for the communities of Adak and Atka from the proposed delivery requirement is that the shoreplants that are located in these two communities are direct competitors for same AI Pacific cod set-aside. During years of high AI Pacific cod non-CDQ TAC, this issue would likely not be a concern since each processor would likely have sufficient AI Pacific cod deliveries to operate at or near full capacity, assuming sufficient trawl CV harvest capacity is present in the AI fishery. However, during years of low AI Pacific cod non-CDQ TAC, similar to the current status of the fishery, both processors would be competing for a limited resource. In previous public testimony, representatives of the Adak community have indicated that competition from the offshore sector has contributed to the business difficulties of the Adak shoreplant. Based on these comments concerning competition with offshore sector, it is possible that the proposed action could result in a similar situation for the Adak shoreplant during years when the AI Pacific cod non-CDQ TAC is low. Although the proposed action would limit the AI Pacific cod fishery to only CVs delivering to AI shoreplants, the proposed action would likely still result in competition for AI Pacific cod deliveries between the two AI

shoreplants. The increased competition for AI Pacific cod deliveries between AI shoreplants could contribute to increased business difficulties for the AI shoreplants during years of low AI Pacific cod set-asides.

In contrast to the potential economic activity for the Adak and Atka shoreplants from the proposed delivery requirement of AI Pacific cod, offshore processing vessels that have historically participated in the AI Pacific cod fishery will likely experience a loss of economic activity from the proposed action. As noted in Table 2-36, from 2003 through 2014, the largest reported exvessel value and the first wholesale gross value of AI Pacific cod fishery for the offshore fleets was over $14 million exvessel gross revenue and over $21 million first wholesale gross revenue. From 2003 through 2014, the average exvessel gross revenue was over $4 million and the average first wholesale gross revenue was over $8 million. By comparison, these same CVs averaged $95.2 in total exvessel gross revenue from all groundfish during that same time period, and the CPs averaged $205 million in total first wholesale gross revenue for all groundfish during the same time period (Table 2-35).

Table 2-36 Exvessel and first wholesale value from the directed AI Pacific cod fishery for the offshore processing and shoreplant processing sectors, 2003 through 2014

Year	CV deliveries to AFA/Crab/AM80 motherships and floaters from directed AI Pacific cod		Shoreside landings from directed AI Pacific cod[1]		Total ex-vessel value from directed AI Pacific cod ($)	Total wholsale value from directed AI Pacific cod ($)
	Ex-vessel value ($)	Wholesale value ($)	Ex-vessel value ($)	Wholesale value ($)		
2003	8,272,110	7,986,764	5,377,323	9,522,632	13,649,434	17,509,397
2004	1,438,632	4,215,241	4,923,530	8,930,888	6,362,162	13,146,129
2005	834,218	1,851,187	3,414,470	8,620,580	4,248,688	10,471,767
2006	3,693,522	7,049,579	4,399,114	8,178,468	8,092,636	15,228,048
2007	4,153,528	8,377,184	12,476,314	21,181,840	16,629,842	29,559,024
2008	14,254,515	21,312,204	7,558,052	10,660,803	21,812,568	31,973,007
2009	3,469,886	6,449,189	4,610,464	10,214,647	8,080,350	16,663,835
2010	7,095,157	20,705,201	263,730	759,761	7,358,887	21,464,962
2011	4,577,700	12,673,712	22,823	57,417	4,600,523	12,731,129
2012	2,567,600	5,732,161	5,164,124	12,243,533	7,731,723	17,975,693
2013	749,592	1,851,072	4,400,116	10,579,300	5,149,708	12,430,372
2014	956,439	2,950,366	3,434,293	9,839,646	4,390,732	12,790,013

Source: AKFIN, July 10, 2015.

Table orginates from pivot file BSAI_PCOD_VALUE_TGT(07-10)

[1]Includes value of shoreside landings from Adak, Akutan, Dutch Harbor, and other Alaska communities

Mitigating the loss in economic activity associated with processing AI Pacific cod by offshore vessels is the potential for these vessels to redeploy to the BS Pacific cod fishery. Both groups of CPs receive sector allocations of Pacific cod that they may fish in either the AI or BS. Therefore, if these fleets are unable to harvest and process Pacific cod in the AI as they have in the past, they may be able to make up part, or all, of the loss in the BS. See Section 2.7.2.1for further details concerning these impacts

As a port of goods and services for CPs and CVs that delivered to CPs, in the AI Pacific cod fishery, Adak has historically received a substantial amount of economic activity from these port visits (see Steller Sea Lion Final EIS). As a result of the proposed management measures to require AI Pacific cod set-aside to AI shoreplants, there will likely be a reduction in the number of port visits to Adak by CPs and CVs that deliver their AI Pacific cod catch to CPs. Vessels may use these port visits for crew transfers, purchasing provisions and fuel, product offloads, and purchases of other local goods and services, among other activities. The proposed delivery requirement and the likelihood of reduced port visits by CPs and their associated CVs to Adak will likely result in lost economic activity for the community of Adak.

Since CVs will be required to deliver AI Pacific cod to one of the two potential shoreplant processing plants. Or potentially any new plants, located in the AI west of 170 degrees longitude, CV participants will have substantially less ability to use processor competition for AI Pacific cod landings to leverage higher prices in negotiations. However, a potential source of negotiating leverage might be exploited under this alternative. First, CV participants could use the threat of not participating in the exclusive AI Pacific cod fishery, instead choosing to wait until the exclusive fishing period had expired, or fish their allocation in the BS Pacific cod fishery. The extent to which a CV participant in the AI Pacific cod fishery can assert leverage depends on the importance of the AI Pacific cod fishery to the participant. If the AI Pacific cod fishery is an important component of the CV's operations, the ability to withhold fishing to leverage a better price is limited. Similarly, the effectiveness of withholding catch from the processor for negotiating leverage also depends on the importance of AI Pacific cod to the AI shoreplant. However, an AI shoreplant that is more dependent on AI Pacific cod is likely to be more responsive to CVs withholding catch. For example, AI Pacific cod is the primary source of revenue for the Adak shoreplant, which improves the potential for CVs to withhold landings to assert negotiating leverage.

In addition, as with other constraints on landings, a regionalized delivery requirements that results in only a few buyers can reduce market and processing innovations that might be developed without the constraints. From 2003 through 2014, there were on average 10 offshore processors and shoreplants in the AI Pacific cod fishery. Competition amongst these 10 processors generally creates an environment of market and processing innovation as these 10 processors compete to capture an increasing share of the AI Pacific cod market. By limiting the AI Pacific cod fishery to only two processors, competition would be limited and thus the incentive to improve market and processing innovations could be reduced. Because this product sells into a global marketplace, suppliers cannot be indifferent to product quality, form, price, or innovation over the long run and remain economically competitive.

2.7.2.3 Dates for CV fishing period

As part of the language in Alternative 2, the Council included three dates, March 1, March 7 or March 15, which would remove the AI Pacific cod exclusive fishing period or set-aside for CVs and the delivery requirement to shoreplants in the AI management area each year. This element was included in Alternative 2 to prevent unharvested non-CDQ AI Pacific cod TAC and to allow CP sectors an opportunity to participate in the fishery.

The AI Pacific cod fishery for the trawl CV sector, historically the most active CV sector, usually starts in mid-February with a sharp increase in fishing and processing during the first two weeks in March, and continuing until the trawl CV sector A season allocation is depleted usually sometime during mid-March to the end of March time period (see Table 2-40). As noted in Table 2-37, the trawl CVs delivering to Adak shoreplant on average, from 2003 through 2015, harvested and delivered 37 percent (1,972 mt) of their total AI Pacific cod to the shoreplant (when operational) by March 1, 52 percent (3,127 mt) by March 7, and 73 percent (4,504 mt) by March 15. Given the historical amount of AI Pacific cod harvested and delivered to the Adak shoreplant during 2003 through 2015, the longer the CV exclusive fishing period and the delivery requirement remain in effect each year, the a greater opportunity for the AI shoreplants to process a larger share of the non-CDQ AI Pacific cod TAC, which could provide increase economic stability for the communities the AI shoreplants reside.

Table 2-37 Annual total trawl CV AI Pacific cod catch, percent of AI ITAC, and percent of AI Pacific cod catch by trawl CVs delivering to the Adak shoreplant on February 28, March 1, March 7, and March 15, 2003 through 2015

			28-Feb			1-Mar			7-Mar			15-Mar		
Year	AI ITAC (mt)	Total catch of AI Pacific cod by trawl CVs (mt)	Catch (mt)	% of AI ITAC	% of AI total AI Pacific cod catch	Catch (mt)	% of AI ITAC	% of AI total AI Pacific cod catch	Catch (mt)	% of AI ITAC	% of AI total AI Pacific cod catch	Catch (mt)	% of AI ITAC	% of AI total AI Pacific cod catch
2003	n/a	8,729	1,400	n/a	16	1,667	n/a	19	3,071	n/a	35	5,413	n/a	62
2004	n/a	9,475	1,762	n/a	19	2,283	n/a	24	3,152	n/a	33	6,137	n/a	65
2005	n/a	6,462	2,489	n/a	39	2,489	n/a	39	3,400	n/a	53	5,529	n/a	86
2006	n/a	6,321	2,709	n/a	43	3,059	n/a	48	3,585	n/a	57	3,789	n/a	60
2007	n/a	9,625	3,752	n/a	39	3,752	n/a	39	6,188	n/a	64	7,998	n/a	83
2008	n/a	4,327	2,559	n/a	59	2,793	n/a	65	3,135	n/a	72	3,189	n/a	74
2009	n/a	8,005	1,544	n/a	19	1,687	n/a	21	3,402	n/a	42	5,996	n/a	75
2010	n/a	0	28	n/a	0	28	n/a	0	92	n/a	0	284	n/a	0
2011	n/a	23	0	n/a	0	0	n/a	0		n/a	0	0	n/a	0
2012	n/a	3,127	1,603	n/a	51	1,632	n/a	52	1,632	n/a	52	1,632	n/a	52
2013	n/a	3,568	1,150	n/a	32	1,150	n/a	32	2,465	n/a	69	2,601	n/a	73
2014	6,248	2,479	720	12	29	822	13	33	1,148	18	46	2,477	40	100
2015	5,793	0	0	0	0	0	0	0		0	0	0	0	0
Average[1]	**6,021**	**4,780**	**1,972**	**6**	**35**	**2,136**	**7**	**37**	**3,127**	**9**	**52**	**4,504**	**20**	**73**

Source: AKFIN, July 10, 2015

Table orginates from BSAI_PCOD_SECTOR_CUM(7-10)

[1] Average is applied to only years when the Adak shoreplant was operational

In contrast, Figure 9 shows that the other sectors, primarily the trawl CP and hook-and-line CP, historical harvested AI Pacific cod starting in early February with a sharp increase during the first two weeks in March. Following this peak, A season harvest of AI Pacific cod by these sectors has tended to decline over the next several weeks due to the closure of the AI Pacific cod fishery. Prior to the implementation of a separate non-CDQ AI Pacific cod TAC in 2014, the hook-and-line CP sector did target AI Pacific cod during the B season.

As for the remaining sectors, including an end date for the directed fishing restriction and AI shoreplant delivery requirement could provide some fishing opportunities in the AI Pacific cod fishery for these sectors. Selecting the March 1 or March 7 options relative to March 15 to remove the exclusive CV fishing period and delivery requirement could provide greater opportunity for the CP sectors to fish in the AI Pacific cod fishery, if sufficient TAC is available. Inhibiting the success of the offshore processing sectors from harvesting the remaining AI Pacific cod is potential for offshore CPs and CVs to be participating in other groundfish fisheries in the AI or BS during this period, few of the offshore processors have secure a buyer for their processed AI Pacific cod, and the potential for deteriorating quality of AI Pacific cod harvested during the last few weeks in March. Despite these limitations, during years of high non-CDQ AI Pacific cod TAC, the offshore processing sectors will likely have a greater opportunity to fish in the AI Pacific cod fishery after the removal of the exclusive CV fishing period and AI shoreplant delivery requirement, while during years of low non-CDQ AI Pacific cod TAC, there will likely be little opportunity for these sectors to participate in the AI Pacific cod fishery after the removal of the directed fishing restriction and AI shoreplant delivery requirement.

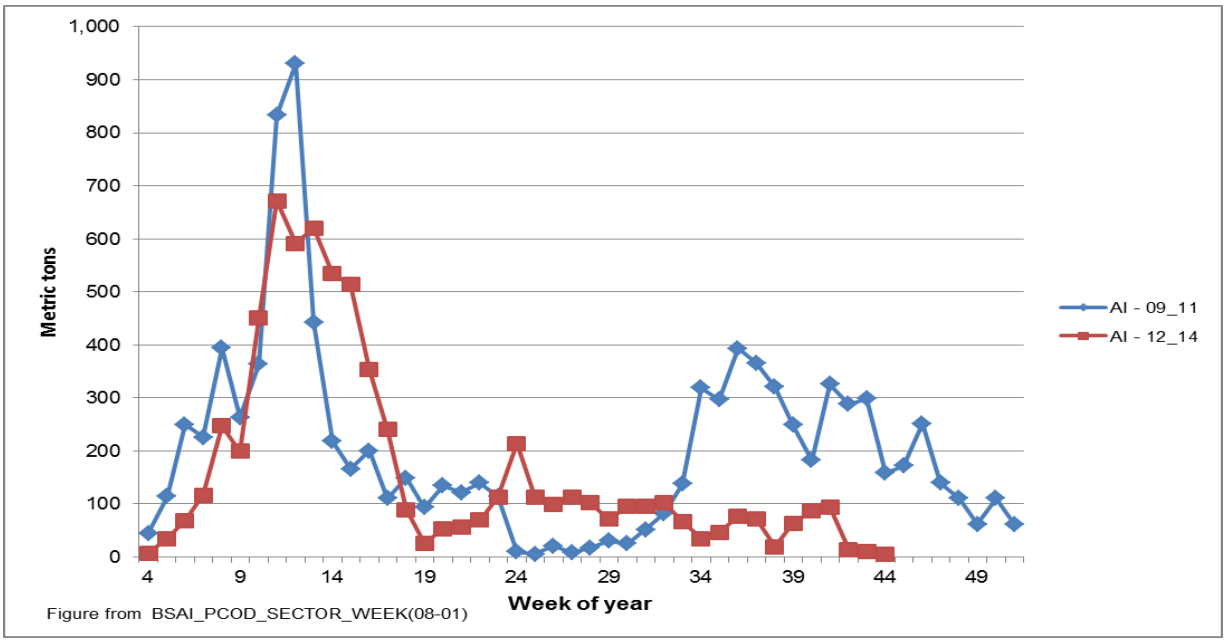


Figure 9 Average retained harvest of Aleutian Islands Pacific cod by week for all harvest sectors except trawl CV sector, 2009 through 2011 and 2012 through July 2014

2.7.2.4 Options for reducing unharvested AI Pacific cod

To further prevent under harvesting the non-CDQ AI Pacific cod TAC due to insufficient AI shoreplant processing capacity, the Council included five additional options. The following is a summary of the effects of each of the additional options.

Option 1

Option 1 would change Alternative 2 from a time specific AI Pacific cod exclusive fishery for CV sectors delivering to AI shoreplants to a set-aside of non-CDQ AI Pacific cod TAC to the CV sectors for deliver to AI shoreplants. Any amount of non-CDQ AI Pacific cod TAC greater than the amount set-aside to the CV sectors would be available at the start of the fishing year to all sectors without an AI shoreplant delivery requirement. In other words, the directed fishing prohibition for all vessels except CVs delivering to AI shoreplants noted in the Alternative 2 language would not apply for any unrestricted portion of the non-CDQ AI Pacific cod TAC.

The set-aside of AI Pacific cod to the CV sectors would be equal to the lessor of the AI directed Pacific cod non-CDQ TAC or (options: 3,000 mt, 5,000 mt, or 7,000 mt). Any amount of non-CDQ AI Pacific cod TAC greater than the set-aside from the trawl CV BSAI allocation would be unrestricted and available for all sectors with available A season combined BSAI allocations.

To help illustrate this option, the following is an example of non-CDQ AI Pacific cod TAC set-aside for CVs and any non-CDQ AI Pacific cod TAC that unrestricted and available for harvest by any sector. Assume the 5,000 mt option was selected by the Council, if the non-CDQ AI Pacific cod TAC available for directed fishing is 10,000 mt, the amount of non-CDQ AI Pacific cod TAC allocated to the CVs before a date certain would be 5,000 mt, while the remaining 5,000 mt of non-CDQ AI Pacific cod TAC would be available concurrently for all sectors with no AI shoreplant delivery requirement. Utilizing that same example but with a non-CDQ AI Pacific cod TAC of 4,000 mt, the amount of non-CDQ AI Pacific

cod allocated to CVs for delivery to AI shoreplants would be 4,000 mt leaving no unrestricted non-CDQ AI Pacific cod TAC available for harvest.

The primary benefit of this option relative to the language proposed in Alternative 2 is that the option allows processing by both offshore and AI shoreplants when there is sufficient non-CDQ AI Pacific cod TAC available. In essence, this option provides both a reduction in the risk of diminished historical processing for the AI shoreplants while also allowing the offshore sectors to plan and conduct processing operations during periods of high AI TAC, which likely reduces the risk of leaving unharvested non-CDQ AI Pacific cod TAC in the water. As noted earlier in the section 2.7.2.1, one of the drawbacks of Alternative 2 language is it prohibits some of the most active vessels in the historical AI Pacific cod fishery from targeting AI Pacific cod until early to mid-March (depending on the date selected by the Council to remove the exclusive fishing restriction and the delivery requirement), which could increase the risk of leaving non-CDQ AI Pacific cod TAC in the water. Option 1 would alleviate some of those drawbacks during periods when non-CDQ AI Pacific cod TAC exceeds the set-aside for the CVs. Obviously, a lower set-aside (3,000 mt or 5,000 mt) would increase the likelihood that there would be unrestricted non-CDQ AI Pacific cod TAC available for offshore sector, while a higher set-aside (7,000 mt) would reduce chances for unrestricted non-CDQ AI Pacific cod TAC for the offshore sector.

With respect to the AI shoreplants, this option, relative to Alternative 2 approach, would reserve a specific amount of non-CDQ AI Pacific cod TAC specifically for CVs to be delivered to AI shoreplants. Processing data shows that during 2003 through 2015, the AI shoreplants processed on average 4,732 mt of non-CDQ AI Pacific cod per year. During four of those 13 years, the amount of non-CDQ AI Pacific cod processed by the AI shoreplants exceeded the 7,000 mt option, but three of the past 12 years the AI shoreplants processed less than 3,000 mt option. During three of the last 13 years, the Adak shoreplant did not operate. Additionally, selecting a specific set-aside for AI shoreplants does not limit the AI shoreplants to just the set-aside.

Option 2

This option builds on language of Alternative 2 that helps prevent stranding non-CDQ AI Pacific cod TAC, by including additional protections if there is insufficient AI shoreplant processing capacity. The option could be applied to the exclusive fishing model of Alternative 2 or the CV set-aside model of Option 1. Specifically, if less than 50 percent of the AI Pacific cod non-CDQ TAC is harvested by (options: February 28, March 7 or March 15), then the AI shoreplant delivery requirement for that year and the restriction on the trawl CV allocation and the CV exclusive fishing period would be removed. As noted in Figure 8, the AI Pacific cod fishery for the trawl CV sector is very short. The CV trawl sector and the AI shoreplants has usually harvested and processed their greatest share of the AI Pacific cod during the first two weeks in March. Recognizing the short AI Pacific cod fishery, selecting a performance measure to prevent stranding AI Pacific cod harvest is challenging and will likely result in limited success. Too early of a performance measure could inhibit the intent of the proposed action, while selecting a date much later in March could inhibit the option as a tool to prevent stranding of AI Pacific cod since offshore sector has limited time to coordinate to harvest and process of the remaining non-CDQ AI Pacific cod TAC since the sector would likely be operating in other fisheries in the BS, AI, or GOA.

Given that the Adak shoreplant has a reported daily production rate of 454 mt and the projected daily production rate for Atka shoreplant, when completed, will be 181 mt, the ability to capitalize on a time allotted for an AI Pacific cod exclusive fishery for the AI shoreplants is likely heavily dependent upon the harvest capacity of the trawl CVs delivering to the AI shoreplants. As noted in Table 2-37, the trawl CV sector delivering to Adak shoreplant on average, from 2003 through 2015, harvested and delivered 35 percent of their total AI Pacific cod catch to the shoreplant (when operational) by February 28. During

that 13 year period, the vessels reached 50 percent only two years, 2008 and 2012. As a percent of non-CDQ AI Pacific cod TAC, the sector harvested and delivered only 13 percent in 2014, the one year there was a separate AI ITAC for Pacific cod and the Adak shoreplant was operational. As for the March 7 option, the trawl CV sector delivering to the Adak shoreplant averaged 52 percent of their total AI Pacific cod catch by this date. During those 13 years, the CVs harvested and delivered 50 percent or greater of their total AI Pacific cod catch to the Adak shoreplant six years. Of the non-CDQ AI Pacific cod TAC in 2014, the trawl CV sector harvested and delivered 18 percent by March 7. The last option is March 15, and this date, in all likelihood, would obviously provide the greatest opportunity for the CV sectors to harvest and deliver the greatest share of the AI Pacific cod allocation to the AI shoreplants. As noted in Table 2-37, the trawl CV sector harvested and delivered every year from 2003 through 2015 greater than 50 percent of their total AI Pacific cod catch to the Adak shoreplant, except those years the Adak shoreplant was not operational.

The primary limitation of selecting a later date for removing the AI shoreplant delivery requirement and removing the CV sector allocation designation is it increases the risk of leaving non-CDQ AI Pacific cod TAC unharvested. As reported by members of the offshore sector, fishing in the AI Pacific cod fishery often requires logistical arrangements starting in December. These arrangements include preparing crew contracts, testing and certified flow scales for both federal and state water AI Pacific cod fishery. Offshore processing vessels are also expensive to operate. For example, American Seafoods has stated that the only other fishery the F/V *Katie Ann* can realistically participate in is the yellowfin sole fishery in the BS. This fishery starts January 20th and it is not practical to terminate a trip prior to filling the freezer holds. Once it is announced that the AI shoreplant delivery requirement has been removed for the year, it will take anywhere from 10 to 17 days before the F/V *Katie Ann* and her fleet of CVs could be the AI Pacific cod fishing grounds. As a result, relying on a performance measure to prevent stranding of AI Pacific cod could have its limitations since the offshore processing sectors has some limitations on flexibility to shift fishing effort to the AI Pacific cod fishery.

In general, the historical performance by the trawl CV sector and the CP sector in the AI Pacific cod fishery during 2003 through 2015, a February 28 performance measure for the AI shoreplants could allow too short a duration for the trawl CV sector to harvest 50 percent of the non-CDQ AI Pacific cod TAC, while a March 15 performance measure would leave only two weeks for the offshore sector to harvest the remaining non-CDQ AI Pacific cod TAC, which in years of high TAC could be too short a period to harvest all of the non-CDQ AI Pacific cod TAC.

Option 3

This option states that if less than 1,000 mt of the AI Pacific cod set-aside has been landed by February 21 or February 28, the restriction on delivery of AI Pacific cod to processors to shoreplants west of 170 degrees longitude in the AI shall be suspended for the remainder of the year. The intent of this option is to provide a performance measure at an earlier date to contrast Option 1, which has a March 7 or March 15 performance date. The earlier performance measure in Option 3 could allow for greater time for additional processing capacity to move into the AI Pacific cod fishery in those years when there is insufficient AI shoreplant capacity, which could reduce the amount of non-CDQ AI Pacific cod TAC left unharvested. As indicated in Table 2-38, the 1,000 mt performance measure had been met five of the past 13 years by the Adak shoreplant for February 21 and nine of the past 13 years for the February 28 option. However, with the exception of three of the past 13 years, the Adak shoreplant did on few occasions failed to meet the performance measure, but ultimately finished the year with significant of quantity of processed AI Pacific cod. Specifically, of the six years the Adak shoreplant did not meet the February 21 performance measure and the two years it did not meet the February 28 performance measure, the shoreplant went on to process a significant share of the AI Pacific cod.

One of the factors that could result in the AI shoreplant not meeting the performance standard is the dynamic nature of the AI Pacific cod fishery. In general, AI Pacific cod tend to aggregate in late February to early March, which is optimal for trawl fishing. During those years when the AI Pacific cod aggregate in early March as opposed to late February, a February 21 performance standard will be difficult to achieve for AI shoreplants. For example, in 2015, trawl CV harvest had not even reach 500 mt of Pacific cod harvested from Areas 541 and 542 combined (areas utilized by shorebased trawl CVs) by February 21. One week later, cumulative trawl CVs harvest of Pacific cod was slightly over 700 mt from Areas 541 and 542. As shown in 2015, the absence of aggregated Pacific cod in Areas 541 and 542 in late February will likely hamper the ability of AI shoreplants to harvest the required 1,000 mt of AI Pacific cod by February 21 or February 28.

Table 2-38 Total AI Pacific cod delivered to the Adak shoreplant up to February 21, February 28, and annual total for each year from 2002 through 2015

Year	Amount of AI Pacific cod delivered to Adak shoreplant (mt)		
	Feb 21	Feb 28	Annual Total
2002	196	769	8,527
2003	683	1,667	8,729
2004	671	1,912	9,475
2005	1,580	2,489	6,462
2006	1,677	3,059	6,321
2007	1,511	3,752	9,625
2008	2,082	2,705	4,327
2009	615	1,684	8,005
2010	0	24	0
2011	0	0	23
2012	1,125	1,574	3,127
2013	866	1,150	3,568
2014	431	822	2,479
2015	0	0	0

Source: AKFIN, July 10, 2015

Table orginates from AI_FEB21(07-10) and AI_FEB28(12-23)

Despite the addition of the one to two weeks of lead time in this option relative to Option 1, it is likely the offshore processors would still find it difficult to quickly move into the AI Pacific cod fishery to offset the loss of AI shoreplant processing even though they may be participating in other AI fisheries. As indicated in the discussion on Option 2, the offshore processing sector requires some advance coordination that is likely more difficult under a February 28th option compared to the February 21 option. Given the nature of the AI Pacific cod fishery in recent years and offshore sector's difficulty in adjusting to an unexpected open delivery of AI Pacific cod, in all likelihood the option to remove the delivery requirement on February 21st if there is insufficient AI shoreplant processing capacity, would likely have better success at limiting unharvested non-CDQ AI Pacific cod TAC then February 28th.

Option 4

Under this option, if prior to (options: November 1 or January 20) of each year, neither the City of Adak or City of Atka has notified NMFS of the intent to process Pacific cod in the upcoming season, the AI

shoreplant delivery requirement is suspended for the upcoming year. Cities[10] can voluntarily provide notice prior the selected date if they do not intend to process Pacific cod.

The advantage of this option is the increased notification of the AI shoreplants not intending to process non-CDQ AI Pacific cod TAC in the upcoming fishery allows for better timing relative to Options 2 or 3 to prepare the logistics of harvesting and processing non-CDQ AI Pacific cod TAC by the offshore processors and non-AI shoreplants. Of the two suggested options for notice of intent, November 1 provides more significantly more time for the industry to make the necessary arrangements to harvest and process the non-CDQ AI Pacific cod if there is no AI shoreplants operating in the upcoming fishing year. In general, more notification concerning processing of AI Pacific cod in the upcoming fishing year will help to reduced stranding of non-CDQ AI Pacific cod TAC.

Option 4 could create a strong incentive for the cities of Adak and Atka to notify NMFS of the intent of a local processor to process Pacific cod in the upcoming season, yet later during the fishing season fail to process Pacific cod as indicated to NMFS. In the past, NMFS's experience with similar options in other programs has shown that it difficult and problematic to determine intent. For example, even if a city might reasonably believe that they will have processing capacity, the delivery requirement will effectively preclude other participants from harvesting and processing during that time. This could lead to participants forgoing catch and stranded non-CDQ AI Pacific TAC. If this option is selected, similar to other programs, NMFS would simple document whether or not they received a letter indicating the intent to process AI Pacific cod, and if so, the restrictions for a regional delivery requirement would go into effect for the specified time period.

Option 5

At the February 2015 meeting, the Council modified the proposed action to include a new Option 5 that would allow qualified CPs to process up to 2,000 mt of non-CDQ AI Pacific cod TAC through either harvesting by the processing vessel itself or delivered by CVs. To eligible for this option, a processor must have processed Pacific cod in the AI management area in at least 12 years between 2000 and 2014. The 2,000 mt exemption limit proposed in this option is similar to a sideboard in that it is a collective limit for all eligible CPs; it does not represent a guaranteed allocation.

This exemption was included as an option for consideration based on public testimony provided by a representative of the F/V *Katie Ann*, who testified to the long-term history the F/V *Katie Ann* as a mothership in the AI Pacific cod fishery, even before implementation of the AFA in 1999. To help facilitate the analysis of this option, the F/V *Katie Ann* representative notified the Council that they would waive their protection of confidential data for AI Pacific cod catch and processing history. A waiver of confidential data restrictions for the F/V *Katie Ann* was submitted by American Seafoods Company to the Council and NMFS on March 24, 2015.

Prior to this proposed action, the Council was considering, but never took final action on a proposal to establish processing sideboards on processing vessels eligible under the AFA, BSAI crab rationalization program, and BSAI Amendment 80 that receive deliveries of Pacific cod harvest in the Eastern and Central AI (Areas 541 and 542). The intent of the processing sideboards was to limit increased processing participation due to consolidation of processing capacity realized through the implementation of a rationalization program. While developing that proposal, the Council modified it to exempt the AFA F/V *Katie Ann* that had long-term history as mothership in the AI Pacific cod fishery. The exemption for the

[10] In the GOA Amendment 66 rule, the city council is identified as the governing body for a community that is incorporated as a municipality under State statutes. If selected, the implementing regulations for this action could similarly specify the entity to represent the city.

F/V *Katie Ann* as a mothership in the AI was based on a review of the December 2008 discussion paper and public testimony that showed that the F/V *Katie Ann* had been receiving and processing AI Pacific cod harvested by CVs in the AI since before the implementation of AFA. Since 2000, the F/V *Katie Ann* was the only AFA vessel that had been taking Pacific cod deliveries annually from the AI. While the harvest data for a single vessel is confidential, it was clear to the Council that the F/V *Katie Ann* had a long-term, continuous participation as a processing vessel in the Area 541 and 542 Pacific cod fisheries. The Council noted that while this was the only AFA vessel currently acting in this capacity, it did not want to exempt the entire AFA processing sector from that action, due to the future possibility of other AFA processing vessels moving into the AI Pacific cod fishery as motherships. The Council also noted that 'continuous' participation was not to be interpreted to mean processing CV deliveries of Pacific cod each day or each season. The intent was to reflect annual participation.

Currently the language in Option 5 can be interpreted several ways, resulting in different numbers of qualifying vessels. First, Option 5 can be interpreted to mean any CP operation, whether harvesting and processing or acting as a mothership, would qualify if they met the participation criteria. Second, Option 5 can be interpreted to count both incidental Pacific cod and directed Pacific cod toward the threshold of 12 years of processing participation. Since the option is unclear on what constitutes a qualifying year, Table 2-39 provides a vessel count for CPs and motherships that processed both targeted and incidental AI Pacific cod from 2000 through 2014. The table also provides a vessel count for both operation types that targeted AI Pacific cod during 2000 through 2014. Applying the most liberal interpretation of the Option 5, for vessels acting as a CP processing both target and incidental AI Pacific cod, 10 CPs would qualify for the exemption with a combined average processing of AI Pacific cod during the qualifying years of 9,222 mt. Narrowing the interpretation of Option 5 to CPs processing only target AI Pacific cod, 4 CPs would qualify for the exemption with an average processing of 6,698 mt during the qualifying years. Further narrowing the interpretation of Option 5 to just CPs acting as a mothership processing target AI Pacific cod, the fishing vessel F/V *Katie Ann* would be the only CP vessel that qualifies. The average AI Pacific cod processed by the F/V *Katie Ann* during their qualifying years is 3,287 mt[11]. As noted in Figure 10, from 2009 and 2010, the *F/V Katie Ann* received AI Pacific cod as early as the end of January, but received the largest portion of their AI Pacific cod deliveries during weeks 9 and 10. From 2011 through 2014, the *F/V Katie Ann* received AI Pacific cod during weeks 8 through 10, but received the largest portion of their AI Pacific cod deliveries during weeks 11 through 13. The average annual weekly amount of AI Pacific cod delivered to the *F/V Katie Ann* from 2009 through 2015 was 335 mt, with a maximum weekly total of 1,300 mt.

Table 2-39 Number of catcher processors that qualify under different interpretations of Option 5

Catcher processor operation	Number of vessels that processed incidental and targeted AI Pacific cod at least 12 years between 2000 - 2014	Number of vessels that processed targeted AI Pacific cod at least 12 years between 2000 - 2014
Catcher processor	10	4
Mothership	1	1

Source: AKFIN, February 11, 2015

Table orginates from privot file AI_PROC(3-30)

[11] A waiver of confidential data restrictions for the F/V *Katie Ann* was submitted by American Seafoods Company to the Council and NMFS on March 24, 2015.

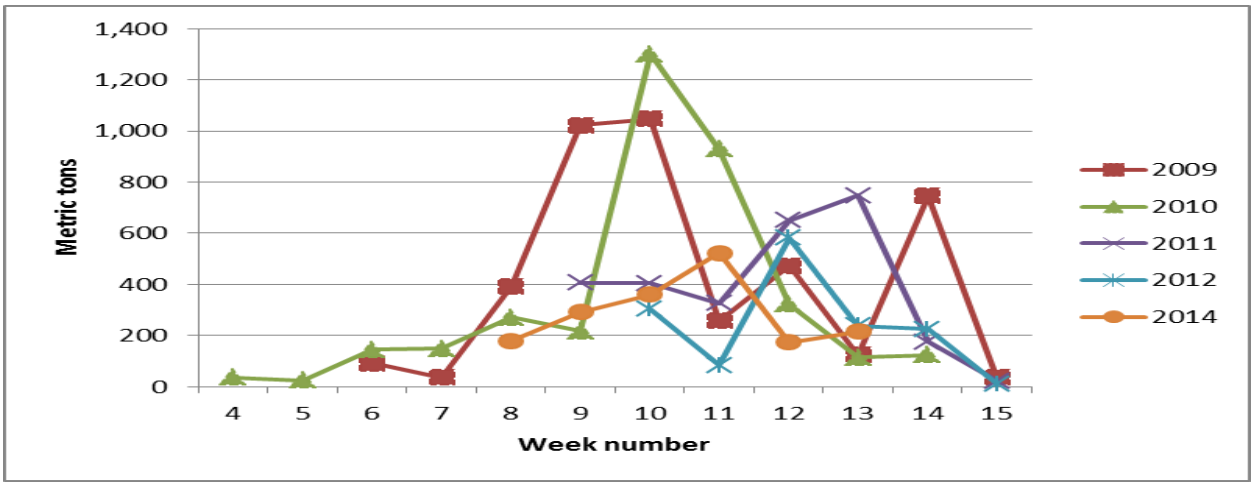


Figure 10 Weekly metric tons of directed AI Pacific cod delivered to the *F/V Katie Ann* from 2009 through 2014

If the Council's intent is to effectively mitigate lost economic activity from the AI Pacific cod fishery for CP vessels with long-term continuous processing activity in the AI Pacific cod, the option could be revised to either increase the exemption limit for AI Pacific cod or limit the exemption to those CP vessels acting as a mothership for AI Pacific cod during the qualifying period. A 2,000 mt processing limit for 10 exempt CPs with an average historical processing of over 9,000 mt of AI Pacific cod would only mitigate a small portion of the lost economic activity from these vessels. However, if the Council's intent is to mitigate lost economic activity from the AI Pacific cod fishery for qualified CP vessels with long-term mothership processing activity in the AI Pacific cod fishery, the 2,000 mt exemption limit would be more effective at mitigating some of this lost economic activity.

This option could reduce the amount of non-CDQ AI Pacific cod TAC delivered to AI shoreplants by up to 2,000 mt, which could reduce the economic activity generated from the processing of AI Pacific cod and therefore reduced the effectiveness of the proposed action to stabilize AI communities. The degree the exemption would impact AI shoreplants depends on how much of 2,000 mt AI Pacific cod exemption limit is processed by the exempt CPs. Coupled with a low non-CDQ AI Pacific cod TAC, the impacts to AI shoreplants from exempt qualified CPs processing a large portion of the 2,000 mt limit, could be significant. At a non-CDQ AI Pacific cod TAC of approximately 4,000 mt, there could be little or no non-CDQ AI Pacific cod TAC available for delivery to AI shoreplants since up to 2,000 mt would be reserved for an ICA, leaving only 2,000 mt for both AI shoreplants and exempt CPs, of which CPs could process the entire 2,000 mt. Short of a non-CDQ AI Pacific cod TAC of greater than 8,700 mt, there will likely be insufficient non-CDQ AI Pacific cod TAC for AI shoreplants to process even their average 2003 through 2015 of 4,732 mt. Based on the Council's stated intent of the proposed action to stabilize AI communities, the Council may want to revise Option 5 to only apply if non-CDQ AI Pacific cod TAC is greater than the amount set-aside from the trawl CV BSAI allocation plus additional 4,000 mt to account for an ICA and the CP exemption limit.

Finally, Option 5 may not be necessary if Option 1 were selected since Option 5 may be mitigated by the selection of Option 1. The intent of Option 1 is to set-aside a specific amount of non-CDQ AI Pacific cod TAC for delivery to AI shoreplants, while any portion of the non-CDQ AI Pacific cod TAC that exceeds that amount could be harvested by any vessel and delivered to any processor, whether an offshore vessel or a shoreplant. A set-aside for delivery to AI shoreplants that also included a 2,000 mt non-CDQ AI Pacific cod TAC exemption limit for eligible CPs under Option 5 appears to run counter to the Council's

intent of providing stability for AI shoreplants and communities in which they reside. Since any portion of non-CDQ AI Pacific cod TAC that exceeds the AI shoreplant set-aside would be available to any sector for directed fishing and is not subject to the regional delivery requirement, eligible CPs under Option 5 would be able to target and process this portion of the non-CDQ AI Pacific cod TAC.

2.7.2.5 Trawl CV Pacific cod harvest limit for BS 'A' season

With Pacific cod sector allocations remaining BSAI-wide, the timing of the BS Pacific cod fishery relative to the AI Pacific cod fishery for the trawl CV sector is necessary to implement this proposed AI community protections as intended. While Alternative 2 allows for directed fishing of AI Pacific cod to CVs of any gear type, the primary CV sector prosecuting this fishery has been trawl, thus BS A season harvest limit is only proposed for the trawl CV sector. As noted in Section 2.7.1.1, the BS Pacific cod fishery for the trawl CV sector tends to start well before the AI Pacific cod fishery, as Pacific cod do not aggregate in the AI until late February to early March. In recent years, the fishery has experienced an increase in fishing effort by the trawl CV sector that has shortened the A season by approximately three weeks. As the pace of fishing in the BS Pacific cod A season fishery for the trawl CV sector has increased, there is the potential that the trawl CV sector could catch all of their A season allocation in the BS prior to the sector harvesting the proposed AI Pacific cod set-aside. To prevent the trawl CV sector from harvesting its entire BSAI Pacific cod A season allocation in the BS prior to completion or the start of the AI Pacific cod fishery, the proposed action would limit the amount of A season trawl CV Pacific cod harvest in the BS prior to a Council selected date-certain of either March 15 or March 21 in order to allow that same amount to be taken in the AI during that time period. If the sector has not harvested its A season allocation prior to the Council selected date, the BS limitation would no longer apply for that year. Also, if the AI closes prior to the Council selected date of March 15 or March 21, the BS limitation would also no longer apply for that year. The A season BS Pacific cod harvest limitation for the trawl CV sector would be an amount equal to the BSAI aggregate trawl CV sector A season allocation, minus the lessor of the AI directed non-CDQ Pacific cod TAC or the Council selected option of either 3,000 mt, 5,000 mt, or 7,000 mt.

As seen in Table 2-31, the trawl CV sector has been closed to directed fishing (bycatch only retention status) due to reaching the A season allocation prior to March 15 in seven years during 2004 through 2013. By regulation, the trawl CV season closes on April 1. The earliest closure for the trawl CV sector was February 27 in 2012, while the latest closure, prior the normal end of the A season, was March 26 in 2011. In 2014 and 2015, the AI Pacific cod fishery closed to directed fishing before the A season trawl CV sector allocation for BSAI Pacific cod was exhausted. Comparing the A season Pacific cod closures for the trawl CV sector with trawl CV Pacific cod catch in the BS and AI by week ending date from 2010 through 2015 in Table 2-40 shows absent such a limit in the BS, it could have preempted the AI Pacific cod fishery in 2012. During that year, the directed fishery closed for the trawl CV sector on February 27. As seen in Table 2-40, the sector had harvested upwards of 30,000 mt of the 38,117 mt Pacific cod allocation in the BS in just five weeks. At the time of the directed fishing closure, the AI fishery was only two weeks into what is normally a six week fishery. During those two weeks, the trawl CV sector harvested approximately 2,500 mt. The remaining AI Pacific cod catch, after the directed fishing closure, was from incidental catch in other directed fisheries. If in the future, a situation similar to 2012 is repeated and there is not a trawl CV limitation of BS harvest, the trawl CV sector would be closed to directed fishing before fishing in the AI.

In those occasions that the BS Pacific cod fishery is closed to directed fishing to prevent preemption of the AI Pacific cod fishery, the effect of this limitation would be a redistribution of Pacific cod from trawl CVs operating in the BS to trawl CVs operating in the AI. On average, from 2012 through 2014, the number of trawl CVs fishing in the BS Pacific cod during the month of March ranges from a low of 78 vessels, to a high of 86 vessels. The distributional loss for trawl CVs operating in the BS would be less

than or equal to the AI set-aside or the Council selected BS limitation of 3,000 mt or 5,000 mt, whichever is less. In 2012, the exvessel price of trawl caught BS Pacific cod was $0.314, which if applied to the BS catch limit of 3,000 mt and 5,000 mt, suggests that the exvessel gross value of that BS catch limit, in 2012, would have been $2.1 million and $3.5 million, respectively. This exvessel value of the BS catch limit represents a redistribution of exvessel value from the BS trawl CV operators to the AI trawl CV operators. If the BS Pacific cod A season trawl CV Pacific cod fishery is restricted to bycatch-only status, those trawl CVs that participate only in the BS Pacific cod fishery would have some loss of exvessel gross revenue, since they could not recoup their lost revenue in the AI Pacific cod fishery.

Table 2-40 Weekly and cumulative total catch of BS and AI Pacific cod by trawl CV sector and remaining trawl CV A season Pacific cod allocation by week ending date, 2010 through 2015

Year	Week ending date	Weekly total BS Pacific cod catch by trawl CVs (mt)	Cumulative weekly total BS Pacific cod catch by trawl CVs (mt)	Remaining trawl CV A season Pacific cod allocation (mt)	Cumulative weekly total AI Pacific cod catch by trawl CVs (mt)	Remaining AI Pacific cod ITAC (mt)* after deducting trawl CV catch
2015	124	864	864	48,360	22	8,392
	131	352	1,216	48,008	29	8,385
	207	2,012	3,228	45,996	103	8,311
	214	3,086	6,314	42,910	1,124	7,290
	221	4,195	10,509	38,715	1,838	6,576
	228	4,311	14,820	34,404	2,607	5,807
	307	4,406	19,226	29,998	0	n/a
	314	3,151	22,377	26,847	0	n/a
	321	2,836	25,213	24,011	0	n/a
	328	1,940	27,153	22,071	0	n/a
2014	125	2,728	2,728	34,351	3	6,245
	201	4,525	7,252	29,827	14	6,234
	208	2,231	9,483	27,596	154	6,094
	215	4,941	14,424	22,655	244	6,004
	222	4,685	19,109	17,970	625	5,623
	301	4,141	23,250	13,829	1,307	4,941
	308	2,850	26,100	10,979	2,429	3,819
	315	1,529	27,629	9,450	4,184	2,064
	322	2,490	30,119	6,960	4,195	2,053
	329	1,263	31,382	5,697	4,219	2,029
2013	126	4,503	4,503	33,468	0	4,194
	202	6,127	10,630	27,341	0	4,194
	209	3,688	14,319	23,652	7	4,187
	216	5,098	19,417	18,554	255	3,939
	223	4,854	24,271	13,700	1,044	3,150
	302	4,948	29,218	8,753	1,818	2,376
	309	1,812	31,031	6,940	4,109	85
	316	176	31,206	6,765	4,194	0
	323	200	31,407	6,564	0	n/a
	330	111	31,518	6,453	0	n/a
2012	121	571	571	37,546	0	4,836
	128	2,418	2,989	35,128	0	4,836
	204	6,456	9,445	28,672	0	4,836
	211	7,526	16,971	21,146	0	4,836
	218	5,382	22,354	15,763	1,527	3,309
	225	6,209	28,562	9,555	2,470	2,366
	303	1,695	30,258	7,859	2,862	1,974
	310	291	30,549	7,568	2,965	1,871
	317	141	30,690	7,427	2,990	1,846
	324	101	30,791	7,326	3,262	1,574
	331	1,581	32,372	5,745	4,836	0
2011	122	339	339	32,951	0	6,622
	129	2,387	2,726	30,564	0	6,622
	205	2,687	5,413	27,877	0	6,622
	212	3,329	8,742	24,548	9	6,613
	219	2,982	11,724	21,566	515	6,107
	226	2,104	13,829	19,461	1,355	5,267
	305	3,368	17,196	16,094	2,452	4,170
	312	3,478	20,674	12,616	3,234	3,388
	319	2,589	23,263	10,027	5,080	1,542
	326	4,095	27,359	5,931	6,622	0
2010	123	309	309	24,340	36	12,647
	130	1,371	1,680	22,969	66	12,617
	206	1,869	3,549	21,100	211	12,472
	213	2,631	6,180	18,469	525	12,158
	220	3,381	9,561	15,088	1,666	11,017
	227	2,072	11,633	13,016	3,840	8,843
	306	1,135	12,768	11,881	8,314	4,369
	313	1,184	13,952	10,697	12,494	189
	320	161	14,113	10,536	12,650	33
	327	160	14,272	10,377	12,683	0

Source: AKFIN, July 9, 2015.
Table orginates from pivot file BSAI_CUMU(7-9)
* For 2010 through 2013, trawl CV catch in the AI was used as substitue for AI ITAC

2.8 Implementation Issues

Alternative 2 would increase NMFS' administrative burden and complicate the annual harvest specifications process compared to the status quo. The November 1 and December 15 deadlines for the communities to provide notice to NMFS of whether they will process Pacific cod in the coming year occur between the proposed and final harvest specification being established.

To accommodate uncertainty NMFS would establish conservative DFA for AI Pacific cod to accommodate incidental catch in other directed fisheries in the AI. A large ICA, particularly in the first years following implementation would correspond with lower DFA. This may increase the potential for the Pacific cod fishery to close earlier than the historic dates (see Table 2-31), or potentially prior to the publication of the final harvest specifications for that year. Early closure would place AI Pacific cod on bycatch/PSC status and could lead to regulatory discards if the ICA were set too low.

NMFS would be able to track CV catch of AI Pacific cod using existing reporting methods and catch accounting system. Currently, CVs are required to report catch using eLandings (Interagency Electronic Reporting System). These reports require that vessels delivering catch report the State of Alaska statistical areas where the catch occurred. NMFS can determine the Federal management area where catch occurred from these statistical area reports, verify the catch was from a CV, and determine if the landing was delivered to an AI shore-based processor. NMFS would continue to sum all directed Pacific cod landings by CVs and deliveries to all AI shore-based processors, and close the directed fishery, as necessary, when the limit has been reached. The limit on the amount of A season trawl CV Pacific cod harvest in the BS appears manageable from NMFS's perspective, but this proposed limit on harvest in the BS adds another allocation to monitor which increases the burden on management.

Option 4 requires that the City of Adak or City of Atka notify NMFS by either November 1 or December 15 of each year of their intent to process Pacific cod in the upcoming year. If NMFS did not receive notification by the selected date, the AI shoreplant delivery requirement for the year would be suspended. Therefore, there are strong economic incentives for the Cities of Adak and Atka to notify NMFS of the intent of a local processor to process Pacific cod in the upcoming season. However, this is does guarantee that the local processor will process Pacific cod during the upcoming season. Even if a community might reasonably believe that they will have the processing capacity, the delivery requirement would effectively preclude other participants from harvesting and processing the AI Pacific cod during that time. This could lead to participants forgoing catch and stranding AI Pacific cod TAC. From an enforcement perspective, the difficulty in regulating intent will likely result in no enforcement action against the community or shoreplant that filed a notice to processed AI Pacific cod in the upcoming season, but later decided to not process AI Pacific cod.

Both date options would give the shoreplants and fishery participants sufficient time to plan and prepare before the A season begins. There is some likelihood that the November 1 notification date might encourage shoreplants to say they intend to accept deliveries even if they do not have a completed plan for the upcoming fishing season. Pacific cod TACs are unknown in November because the Plan Team and Council's Science and Statistical Committee do not meet until late November and early December, respectively. Absence a specific AI Pacific cod TAC for the upcoming year, there is some potential for a shoreplant to miscalculate the available TAC and notify NMFS of their intent to process AI Pacific cod in the upcoming season. Later, after the TACs are determined at the December Council meeting, the shoreplant has determined that the available AI Pacific cod TAC is insufficient to support the costs of operating the shoreplant and therefore elects to not process AI Pacific cod in the upcoming fishing year. The December 15 is generally after the December Council meeting when the TACs have been set, and therefore would allow the AI shoreplants to assess their business plan for the upcoming fishing year based

on the available AI Pacific cod TAC. Ideally, notice of intent to process would be provided to NMFS by a date near the end of the December Council meeting.

The Council might wish to specify who would provide NMFS notice of the intent to process (e.g., mayor, city manager, shoreplant manager). If the Council does not specify, NMFS would need to determine from whom notice would be received and include that information in the implementing regulations.

At the February 2015 meeting, the Council requested staff explore with NMFS whether there is an approach that would allow community notification and application of the regional delivery requirement specific to the processing capacity of the community. The challenge with a community notification that has a processing capacity element is the integration with the exclusive access approach utilized in Alternative 2 or the set-aside approach utilized in Option 1. Without more information concerning this integration from the Council, it will difficult to develop community notification regulations that contain a processing capacity element. For example, if a processor notifies NMFS that they are not planning on processing, would managers extrapolate the maximum processing capacity of the remaining shoreplants and reserve that portion of AI Pacific cod TAC for remaining AI shoreplants? Assuming there is AI Pacific cod TAC available for directed fishing after funding the AI shoreplants portion, is the remaining AI Pacific cod TAC available for directed fishing by any sector? In another example, clarification from the Council on calculating processing capacity is likely necessary. Processing capacity could be based on their reported maximum capacity as in Section 2.6.8, or processing capacity can vary from year-to-year and would be self-reported. As noted in Section 2.6.8, the maximum reported capacity for the Adak shoreplant is 454 mt per day and for the Atka shoreplant, when completed, will be 181 mt per day. Extrapolated across the AI Pacific cod fishery, each shoreplant has the capacity to harvest all or nearly all of the current AI Pacific cod TAC. If variable processing capacity is utilized, cities have an incentive to overstate their processing capacity to increase their portion of the AI Pacific cod TAC set-aside. Finally, as noted above, requiring notification of the intent to process is not enforceable if later the processor does not in fact process, and therefore, by extension, any capacity specifics linked to that notification would also not be enforceable.

2.9 Net Benefit to the Nation

Overall, this action is likely to have a limited effect on net benefits to the Nation. In large part, the action affects distributional equity among various sectors eligible to harvest and process AI Pacific cod. To the extent that the AI Pacific cod CV exclusive fishing period or the set-aside for CV sectors during most of the A season and processing of AI Pacific cod is limited to only shoreplants in the AI management area, this limits harvest and processing by the three rationalized sectors at issue (AFA, Crab, and Amendment 80). As a result, this action has primarily distributional effects on the universe of existing participants, by providing a priority for the CV sector to prosecute the AI Pacific cod fishery at low TAC levels as opposed to the CP sector. As a result, there would likely be some economic inefficiency introduced into the AI Pacific cod fishery from the proposed action, which could result in some reduced net benefits to the nation.

3 Environmental Assessment

This section evaluates the impacts of the alternatives and options on the various environmental components. The socio-economic impacts of this action are described in detail in the Regulatory Impact Review (RIR) and Initial Regulatory Flexibility Analysis portions of this analysis (Sections 2 and 4).

Recent and relevant information, necessary to understand the affected environment for each resource component, is summarized in the relevant subsection. For each resource component, the analysis identifies the potential impacts of each alternative, and uses criteria to evaluate the significance of these impacts. If significant impacts are likely to occur, preparation of an environmental impact statement (EIS) is required. Although an EIS should evaluate economic and socioeconomic impacts that are interrelated with natural and physical environmental effects, economic and social impacts by themselves are not sufficient to require the preparation of an EIS (see 40 CFR 1508.14).

The National Environmental Protection Act (NEPA) also requires an analysis of the potential cumulative effects of a proposed action and its alternatives. An environmental assessment (EA) or (EIS) must consider cumulative effects when determining whether an action significantly affects environmental quality. The Council on Environmental Quality (CEQ) regulations for implementing NEPA define cumulative effects as:

> *"the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time" (40 CFR 1508.7*).

The discussion of past and present cumulative effects is addressed with the analysis of direct and indirect impacts for each resource component below. The cumulative impact of reasonably foreseeable future actions is addressed in Section 3.7.

3.1 Purpose and Need

Since April 2008, the Council has been evaluating the need for community protections in the AI due to the implementation of rationalization programs for various fisheries. This rationalization has resulted in excess processing capacity that has been used in the AI Pacific cod fishery. The specific rationalization programs are American Fisheries Act (AFA), Bering Sea and Aleutian Islands (BSAI) crab rationalization, and BSAI Amendment 80. These programs provide benefits to processing vessels and afford opportunities for consolidation, thus, freeing some processing capacity to target and process the non-rationalized BSAI Pacific cod fishery.

In December 2013, the Council adopted separate TACs for the BS and AI populations of Pacific cod. This action was tied to concerns about the declining AI Pacific cod population. The 2014 BS Pacific cod TAC was set at 246,897 mt and the AI Pacific cod TAC was set at 6,997 mt. The TAC for the AI is significantly lower than what was anticipated several years ago, and it is not anticipated that TAC for AI Pacific cod will increase in the near-term. Affected by these changes in the AI Pacific cod fishery are two shoreplants in the AI, and the communities these shoreplants are located critically depend on those shoreplants. Primary amongst these shoreplants is the one located in Adak, which in the past received a vast majority of the AI cod landings from both the state and Federal AI Pacific cod fisheries (see Table 2-25 and Table 2-32). In the past, Pacific cod deliveries to the Adak shoreplant alone were in the 6,000 mt

to 10,000 mt range. As the AI TAC is now set separately and is relatively low, the risk of processing vessels with excess processing capacity closing the AI Pacific cod fishery earlier and eroding the historical share of AI Pacific cod processed by the Adak shoreplant processor is very high.

Given the increased participation in the AI Pacific cod fishery by the rationalized sectors, the Pacific cod TAC split for the BS and AI that was implemented in 2014, and the new Steller sea lion protection measures implemented in 2015, the Council adopted a problem statement to initiate the proposed action at the February 2014 Council meeting. Consideration of this action to provide some stability to AI shoreplant operations and AI communities is consistent with the Council's objectives for this action.

In February 2015, the problem statement was modified to include the Council's concern of the continued risk of increased processing participation by rationalized sectors in the non-rationalized AI cod fishery, which was the original reason the Council began focusing on AI shoreplant processor stability in 2008. The problem statement was also modified in February 2015 to account for the impacts to the AI shoreplant processors and communities and the need for community protections as a result of the recent BS and AI Pacific cod total allowable catch split and relatively low Pacific cod stock abundance in the AI. The following is the adopted problem statement for this proposed action:

> *The American Fisheries Act, BSAI Crab Rationalization, and BSAI Amendment 80 management programs provided benefits to processing vessels that were intended to protect their investments in, and dependence on, the respective fishery resources. Each of these programs has also afforded participants opportunities for consolidation, allowing for increased participation in the non-rationalized BSAI Pacific cod fishery in the Aleutian Islands, thus increasing the risk that the historical share of BSAI cod of other industry participants and communities that depend on shoreplant processing in the region may be diminished. The BSAI cod TAC split and relatively low Pacific cod stock abundance in the Aleutian Islands further increase the need for community protections.*

3.2 Proposed Alternatives

The following are the Council's adopted alternatives and options for analysis. For a detailed description on how these alternatives and options were developed, see Section 2.4.1.

Alternative 1. No Action

Alternative 2. Prior to (**options:** March 1, 15, 21) the A season trawl CV Pacific cod harvest in the Bering Sea shall be limited to an amount equal to the BSAI aggregate CV trawl sector A season allocation minus the lessor of the AI directed Pacific cod non-CDQ TAC **or (options:** 3,000 mt, 5,000 mt, 7,000 mt). Directed fishing for AI Pacific cod is prohibited for all vessels except CVs delivering to shoreplants west of 170° longitude in the AI prior to **(options:** March 1,7, 15).

The following options are not mutually exclusive:

Option 1: Any amount of the AI Pacific cod non-CDQ TAC above the amount set-aside from the trawl CV BSAI allocation may be available to any sector for directed fishing and is not subject to the regional delivery requirement.

Option 2: If less than 50% of the AI Pacific cod non-CDQ TAC has been landed at the AI shoreplants[12] by (**options:** February 28, March 7, 15), the restriction on the delivery to other processors and the restriction on the trawl CV sector allocation shall be removed.

Option 3: If less than 1,000 mt of the AI Pacific cod non-CDQ TAC has been landed at the AI shoreplants[1] by (**options:** February 21, 28) the restriction on delivery to other processors and the restriction on the trawl CV sector allocation shall be suspended for the remainder of the year.

Option 4: If prior to (**options:** November 1, December 15), neither the City of Adak nor the City of Atka have notified NMFS of the intent to process Pacific cod in the upcoming year, the Aleutian Islands shoreplant[1] delivery requirement is suspended for the upcoming year. Cities can voluntarily provide notice prior to the selected date if they do not intend to process.

Option 5: Any processor that has processed cod in the Aleutian Islands management area in at least 12 years between 2000 and 2014 shall be exempt from these restrictions for processing levels up to 2,000 mt.

Shoreplant is defined as a processing facility physically located on land.

3.3 Description of Action Area

The Council motion clarifies that the action would affect Pacific cod harvested in the AI from the federally-managed and State parallel fisheries. The motion also notes that Pacific cod harvested by trawl CV sector in the BS would also be affected. Therefore the proposed action focuses on the Pacific cod fishery in the AI (Areas 541, 542, and 543) and the BS (refer to Figure 11 for a map of these areas). The BSAI includes water of the Economic Exclusive Zone (EEZ) from 3 nm to 200 nm off Alaska. State of Alaska waters are those from 0 nm to 3 nm offshore.

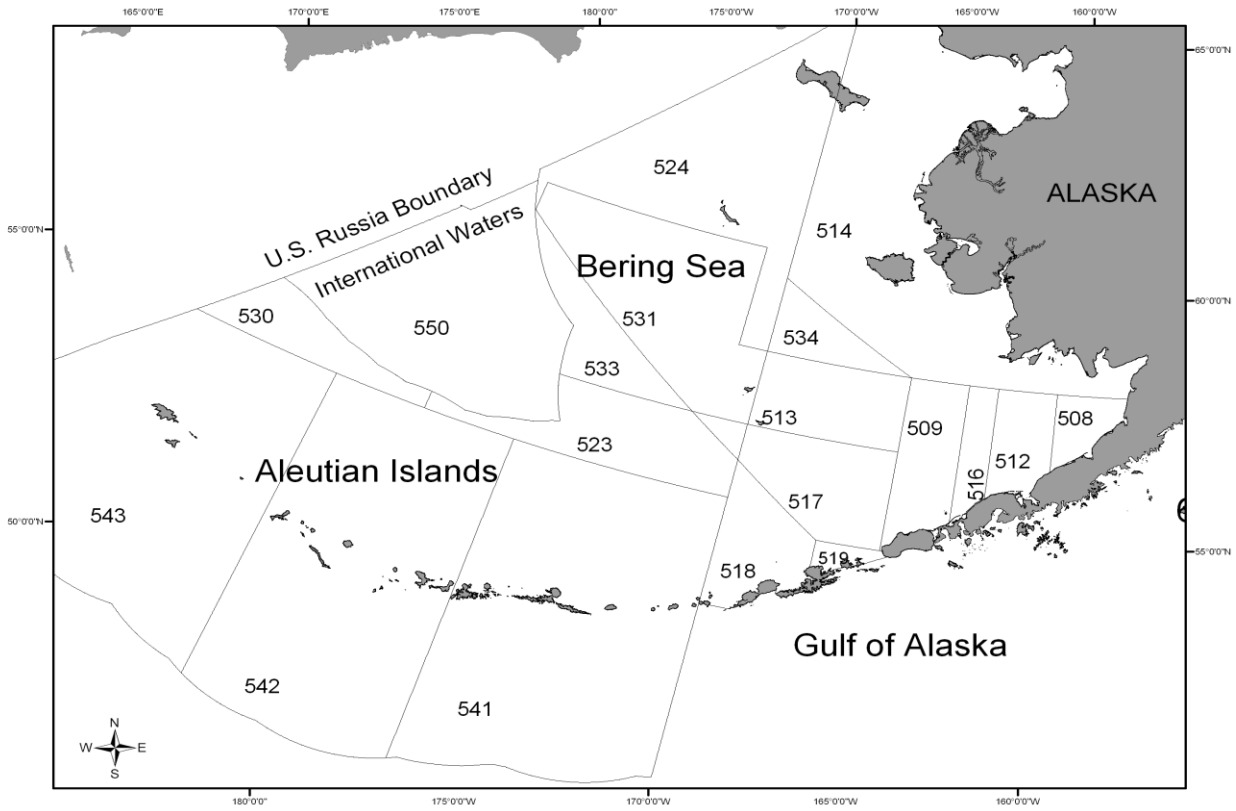
The State parallel fishery is opened at the same time as the Federal fishery in Federal waters. State parallel fishery harvests accrue toward the Federal TAC and Federally-permitted vessels move between State and Federal waters during the concurrent parallel and Federal fisheries. The State opens the parallel fisheries through emergency order by adopting the groundfish seasons, bycatch limits, and allowance gear types that apply in the adjacent Federal fisheries.[13]

The proposed action would not affect the State-managed Pacific cod fishery that occurs in State waters in both the BS and AI. The BS and AI fisheries were established by the Alaska Board of Fisheries, but the BS was established in 2014 and the AI was established in 2006. Both State-managed Pacific cod fisheries comprise 3 percent of Federal BSAI Pacific cod ABC. Both fisheries are managed by the State and have different sector requirements and seasons than the Federal Pacific cod fishery. Additional back background information on the BS and AI State waters Pacific cod fishery are provided in 2.6. The State-managed BS and AI Pacific cod fisheries would not be affected by the proposed action, nor are the harvests in these fisheries used to calculate the proposed AI Pacific cod limit for CVs and the delivery requirement of AI Pacific cod to AI shoreplants.

[12] To better reflect the Council's definition of shoreplant is a processing facility physically located on land, staff changed the wording in the option from shoreside, which could include stationary floating processors, to AI shoreplants, which would exclude stationary floating processors.

[13] In some cases, the State may establish additional gear or vessel size restrictions in State waters that would apply even during the parallel fishery (i.e., if the State establishes a general prohibition on trawl gear in State waters, that continues to apply during the parallel fishery).

Figure 11 Regulatory and reporting areas in the BS and AI.



3.4 Analytical method

The proposed regulatory amendment to prioritize the AI Pacific cod for delivery to shoreplants in the AI management area will not likely affect all environmental components of the BSAI. As a result of the proposed action, three are potentially two components: groundfish, marine mammals, and socioeconomic. The effects on the alternatives on the resource components would be caused by limiting the AI Pacific cod fishery to primarily CVs, which could shift harvest distribution in the AI Pacific cod fishery thereby affecting groundfish and marine mammals in the AI management area. The socioeconomic environment would be affected through the prioritizing AI Pacific cod set-aside for CVs and the requirement that the set-aside to be delivered to shoreplants in the AI management. The affected resource component in relation to each alternative is discussed in detail below.

3.5 Target groundfish species

3.5.1 Pacific cod

Model predictions indicate that this stock is neither overfished nor approaching an overfished condition. Further information on Pacific cod, including effects of fishing on the age and size structure of Pacific cod stocks, may be found in the Pacific cod chapter of the annual *Stock Assessment and Fishery Evaluation* report (Thompson and Lauth 2013), Steller Sea Lion Protection Measures EIS (NMFS 2014), Groundfish PSEIS (NMFS 2004) and the EFH EIS (NMFS 2005). These documents are incorporated by

reference. Relevant information from these documents is summarized in this section. This section also contains recent information on Pacific cod and its fishery.

Pacific cod (*Gadus macrocephalus*) is a transoceanic species, occurring at depths from shoreline to 500 m. Pacific cod is distributed widely over the eastern Bering Sea as well as in the Aleutian Islands. Unlike Atka mackerel, the BSAI Pacific cod ABC and TAC are not allocated by districts; a single ABC and a single TAC currently limit harvests throughout the BSAI management area. Operations fishing CDQ, and each of the non-CDQ sectors that receives an allocation, may fish their allocation within the Aleutian Islands or the Bering Sea, subject only to its overall harvest limit, and any seasonal, or other, restrictions on harvests. Information related to stock assessment parameters, biomass estimates, and survey design can be found in the 2013 BSAI Pacific cod stock assessment.

The Pacific cod assessment is based on a stock synthesis model that uses multiple data sources. It includes both fishery and survey data from the Eastern Bering Sea trawl surveys. In the 2012 stock assessment, spawning biomass is estimated to be well above B40 percent, and is projected to increase further. These increases are fueled largely by the 2006, 2008, and 2010 year classes, whose strengths have now been confirmed by multiple surveys. In addition, the 2011 year class also appears to be very strong, although this estimate must be regarded as highly preliminary.

Currently the stock assessment model for Pacific cod is configured to represent the portion of the Pacific cod population inhabiting the Bering Sea survey area. The model projections are then adjusted to include biomass in the Aleutian Islands survey area. Model predictions indicate that this stock is neither overfished nor approaching an overfished condition.

From 1980 through 2009, the BSAI TAC averaged about 80 percent of ABC and aggregate commercial catch averaged about 90 percent of TAC. The history of ABC and TAC levels is summarized and compared with the time series of aggregate (i.e., all-gear, combined area) commercial catches in Table 3-1.

As shown in Table 3-1, the Council tends to set TACs below ABCs by larger amounts when the ABC is unusually large. The Council did not set TACs equal to ABC for any ABC above 280,000 metric tons during this period.

Tagging studies (Shimada 1994) have demonstrated significant migration both within and between the Bering Sea, Aleutian Islands, and GOA. Although at least one previous genetic study (Grant, Zhang, and Kobayashi 1987) failed to show significant evidence of stock structure within these areas, current genetic research underway at the AFSC is providing additional information on the issue of stock structure of Pacific cod within the BSAI (M. Canino, AFSC, personal communication, 2012). Pacific cod is not known to exhibit any special life history characteristics that would require it to be assessed or managed differently from other groundfish stocks in the Bering Sea or Aleutian Islands. The best estimate of long-term average biomass distribution is 93 percent in the Bering Sea and 7 percent in the Aleutian Islands (NPFMC 2012).

Table 3-1 BSAI Pacific cod ABC, TAC, and total catch 1981 to 2013 (amounts in metric tons)

Year	ABC	TAC	Catch
1981	160,000	78,700	63,941
1982	168,000	78,700	69,501
1983	298,200	120,000	103,231
1984	291,300	210,000	133,084
1985	347,400	22,000	150,384
1986	249,300	229,000	142,511
1987	400,000	280,000	163,110
1988	385,300	200,000	208,236
1989	370,600	230,681	182,865
1990	417,000	227,000	179,608
1991	229,000	229,000	220,038
1992	182,000	182,000	207,272
1993	164,500	164,500	167,362
1994	191,000	191,000	193,802
1995	328,000	250,000	245,033
1996	305,000	270,000	240,676
1997	306,000	270,000	257,765
1998	210,000	210,000	193,256
1999	177,000	177,000	173,998
2000	193,000	193,000	191,060
2001	188,000	188,000	176,749
2002	223,000	200,000	197,356
2003	223,000	207,500	196,495
2004	223,000	215,500	212,161
2005	206,000	206,000	205,635
2006	194,000	194,000	189,304
2007	176,000	170,720	170,296
2008	176,000	170,720	166,391
2009	182,000	176,540	173,652
2010	174,000	168,780	168,015
2011	235,000	227,950	219,866
2012	314,000	261,000	245,367
2013	307,000	260,000	245,366

Source: NPFMC 2013 and NMFS Catch Accounting System

The differences between Aleutian Islands and Bering Sea Pacific cod were compiled in 2008. The purpose of the report was to compile all known data available for Pacific cod in the Eastern Bering Sea and Aleutian Islands subarea and discuss the differences between the areas. The report found that genetic information suggested Pacific cod in the Aleutian Islands were distinct from those along the Alaska Peninsula. Size difference of Pacific cod between the Aleutian Islands and Bering Sea were also identified. Both length at age and commercial trawl catch information found that Pacific cod were larger in the Aleutian Islands. Age composition also suggested that Pacific cod harvested in the Aleutian Islands were older than Bering Sea Pacific cod harvest. Pacific cod density (t/km2) and fishery exploitation rates were also identified as being higher in the Aleutian Islands than the Bering Sea (Ormseth et al. 2008).

Prior to 2014, the BSAI Pacific cod ABC and TAC was managed as single stock throughout the BSAI management area.[14] At the December 2012 Council meeting, the Science and Statistical Committee (SSC)

[14] The regulations governing the Pacific cod TAC may be found in 50 CFR 679.20(a)(7)(i) and (ii) and the final 2013 and 2014 harvest specifications for groundfish of the BSAI (79 FR 12108 March 4, 2014).

stated that it would recommend separate OFLs and ABCs for Bering Sea and Aleutian Islands Pacific cod for the 2014 and 2015 harvest specifications cycle based on the best available data at the time. The stock assessment for Aleutian Islands Pacific cod was evaluated at the September 2013 BSAI Groundfish Plan Team meeting and October 2013 Council meeting. The Council received a recommendation from the Groundfish Plan Team and SSC regarding the 2014 and 2015 stock assessments to split the Pacific cod stock to an Aleutian Islands stock and a Bering Sea stock. This split was implemented in the 2014 and 2015 final harvest specifications and ABC, TAC, and ITAC are presented in Table 3-2.

Table 3-2 BSAI Pacific cod ABC, TAC, and ITAC 2014 & 2015 (amounts in metric tons)

Year	BS			AI		
	ABC	TAC	ITAC	ABC	TAC	ITAC
2014	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

Pacific cod fishing largely occurs in depths less than 200 m. According to observer data from 2004 through 2010, 95 percent of Pacific cod harvested by trawl vessels was harvested in depths less than 175 m. The average depth was 137 m. Non-trawl gear depth of fishing estimates appear to be slightly shallower with an average of 125 m, however, non-trawl fishing depths recorded in observer data are not considered representative of actual fishing depth.

Figure 12 shows the average location of Pacific cod harvest by trawl CPs for the AI management area from 2004 through 2010. Targeted catch was primarily located in Area 543 along the shelf north of Agattu Island. Further east in Area 542, catch occurred along Kiska and Amchika Islands and on Petral Banks. In Area 541, the majority of the catch occurred off of Atka North Cape with some fishing between Adak and Atka. Most of the Pacific cod catch was in critical habitat except the fishing in areas on Petrel Bank, west of Atka North Cape, and southeast of Seguam Pass. The area off Atka North Cape seems to be important area for most sectors. Figure 13 shows the catch that occurred in 2011 and 2012 by trawl CPs. Due to the closures in Area 543, overall catch by trawl CPs decreased and was primarily located off Atka North Cape, Petrel Banks, and southeast of Seguam Pass.

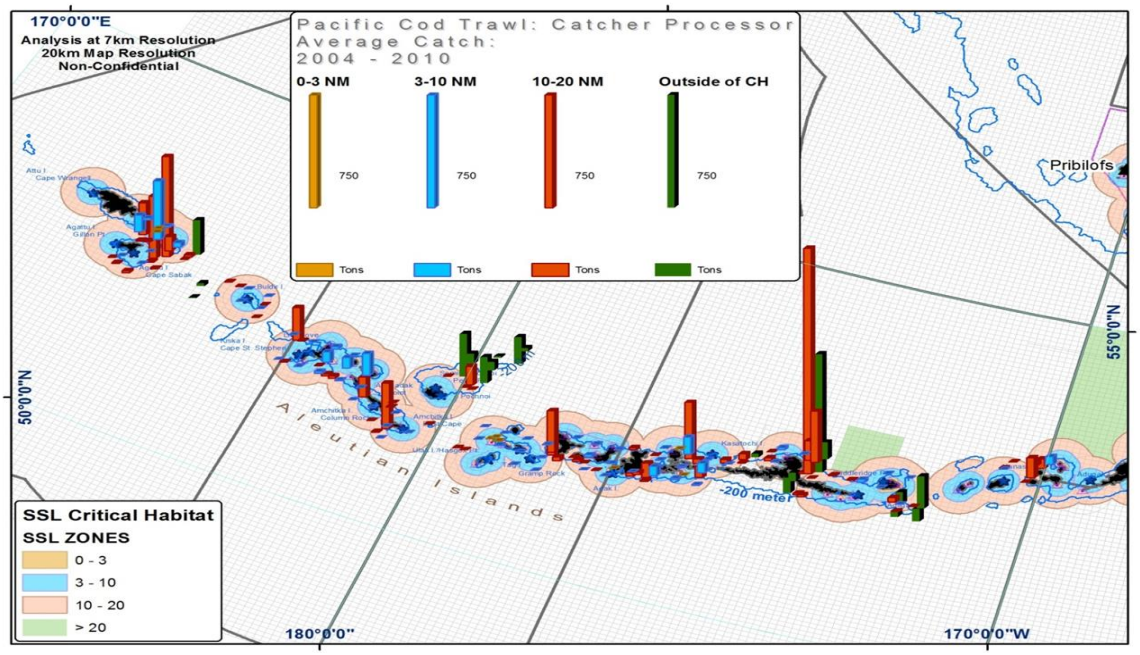


Figure 12 2004 through 2010 average location of Pacific cod harvest by trawl CPs

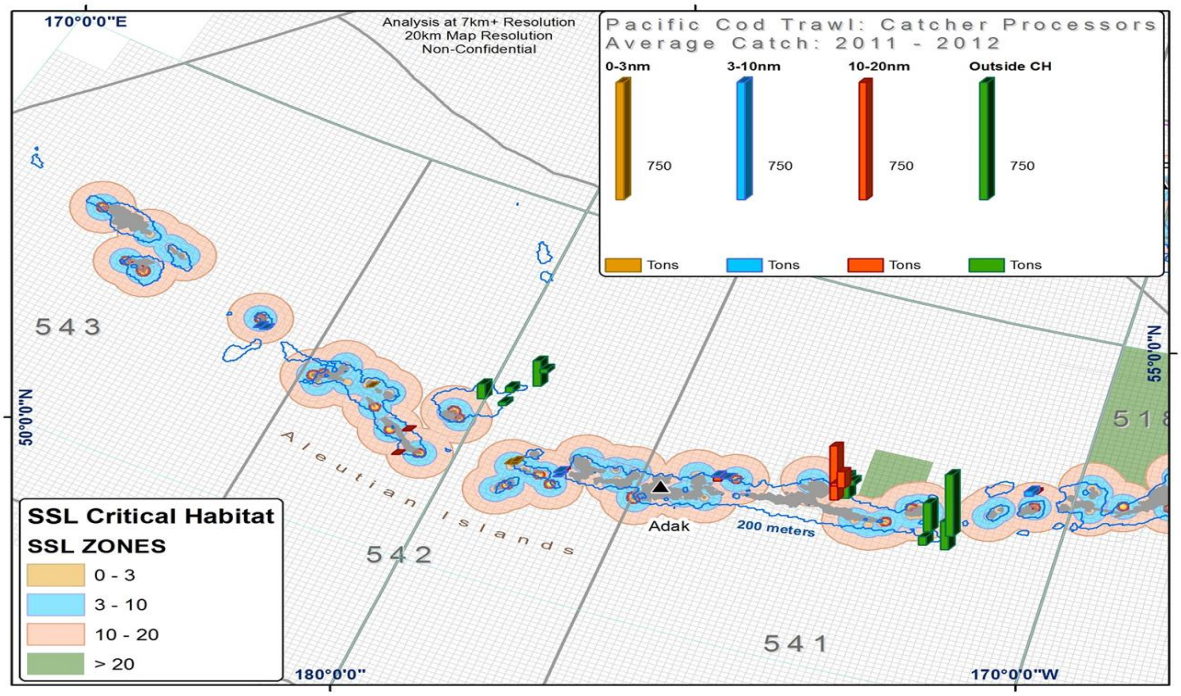


Figure 13 2011 through 2012 average location of Pacific cod by trawl CPs

Figure 14 and Figure 16 show the average location of Pacific cod catch by trawl CVs from 2004 through 2010. This represents catch patterns that occurred prior to the current Steller sea lion RPA. Figure 14 represents the locations used by trawl CVs that deliver to shoreplant processors. As a result of being associated to fixed shoreplant locations, most of the catch is concentrated in areas near the ports of Adak

and Atka. Atka North Cape is the most important area to this sector and vessels harvesting fish in this area deliver to Adak, Akutan, and Dutch Harbor. The area southeast of the port of Adak also is important to these vessels.

Figure 16 shows the CVs that deliver to motherships. These vessels are not associated to a processor with a fixed location. This catch is not as concentrated in areas near a port, but more of this catch is in Area 543. The area used by these vessels is similar to the area used by trawl CPs. This is primarily because vessels that operate as motherships are also vessels that operate as trawl CPs. Outside of Area 543, Atka North Cape also is important to these vessels.

Figure 15 and Figure 17 show the average location of Pacific cod catch by trawl CVs from 2011 and 2012. This represents where catch occurs under the existing Steller sea lion RPAs. As expected, the catch by vessels delivering to motherships did not occur in Area 543 because of the retention prohibition. Catch by vessels delivering shoreplant remained in similar locations as prior years, though in amounts less than had been observed from 2004 through 2010. Overall, the catch seems to have concentrated into the area east of Atka North Cape that has shown to be an important area for all trawl sectors.

In 2011 and 2012, there were many factors for the decrease of catch in the Aleutian Islands. One possible factor is the implementation of the Steller Sea lion RPA management measures. However, factors other than the interim final rule's Steller sea lion protection measures are believed to have had a greater impact on total Pacific cod catch by trawl CVs in the Aleutian Islands.

In the early months of 2011, there was no operating shoreplant processor in the Aleutian Islands. CVs delivering to shoreplant processors fished in the Bering Sea, closer to operating processors in Akutan and Dutch Harbor. In 2011 and 2012, fishermen indicated that the catch rates and size of Pacific cod in January and February were above average. Vessels fished where they were experiencing good Pacific cod fishing and indicated that they were unlikely to move to the Aleutian Islands until it was warranted. In 2012, CVs that could not reach profitable pollock fishing grounds due to the ice edge advance fished for Pacific cod longer than usual. This resulted in an overall increase in Bering Sea trawl CV Pacific cod effort. The result of all these factors was that the 2012 fishery closed about a month earlier than normal. In 2012, there was an operating shoreplant processor in the Aleutian Islands. However, the A season trawl catch vessel Pacific cod allocation was reached soon after vessels began moving to the Aleutian Islands in late February.

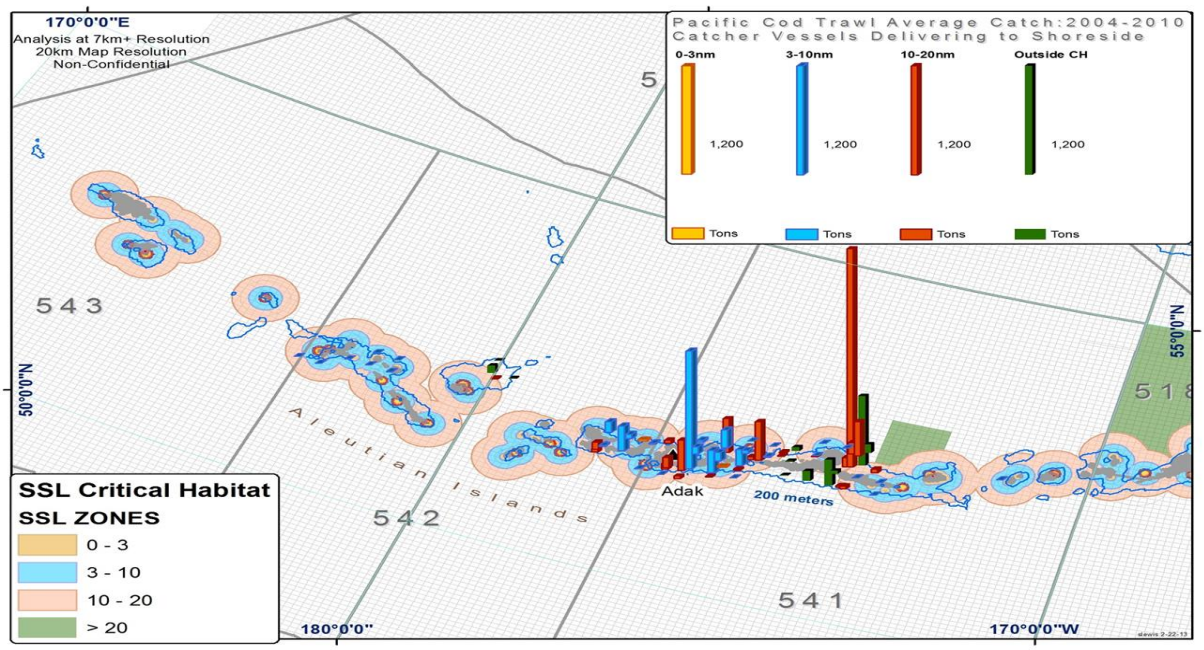


Figure 14 2004 through 2010 average location of Pacific cod harvested by trawl CVs delivering to shoreplants

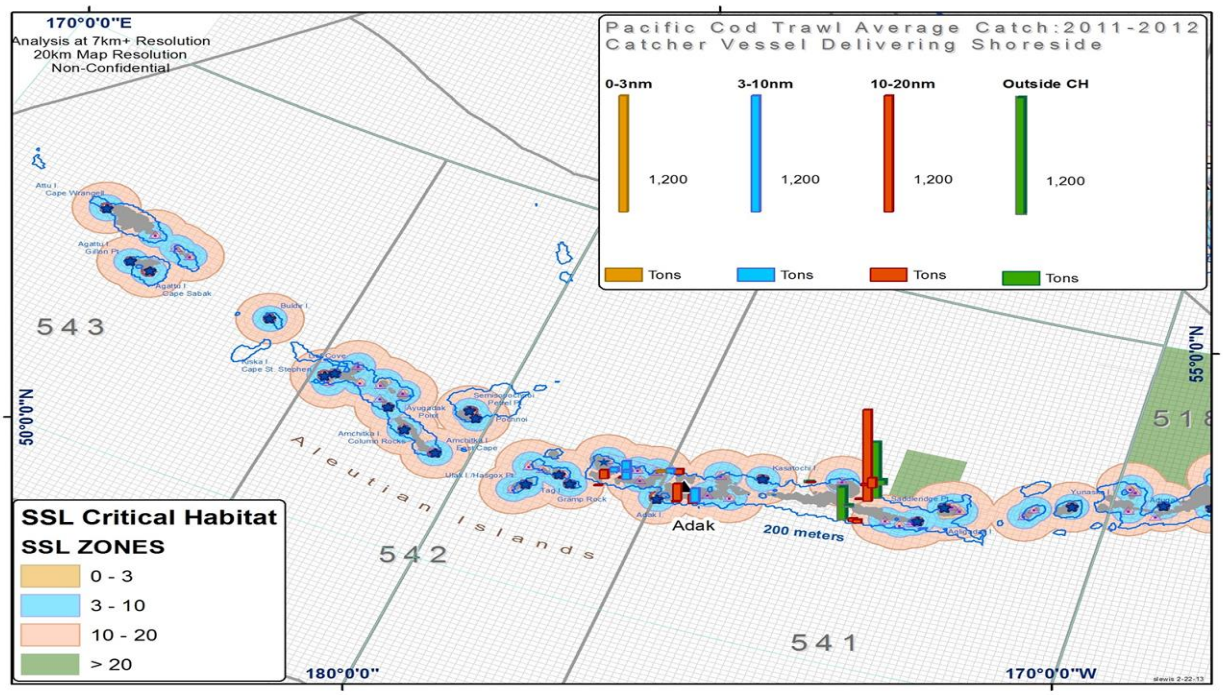


Figure 15 2011 through 2012 average location of Pacific cod harvested by trawl CVs delivering to shoreplants

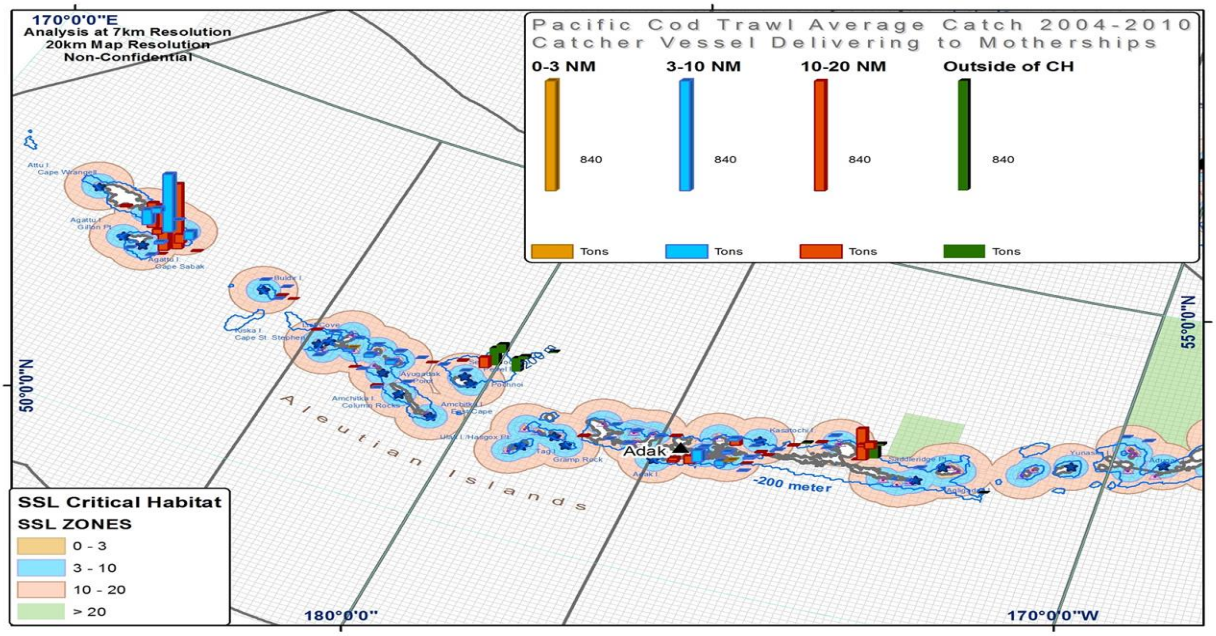


Figure 16 2004 through 2010 average location of Pacific cod harvested by trawl CVs delivering to motherships

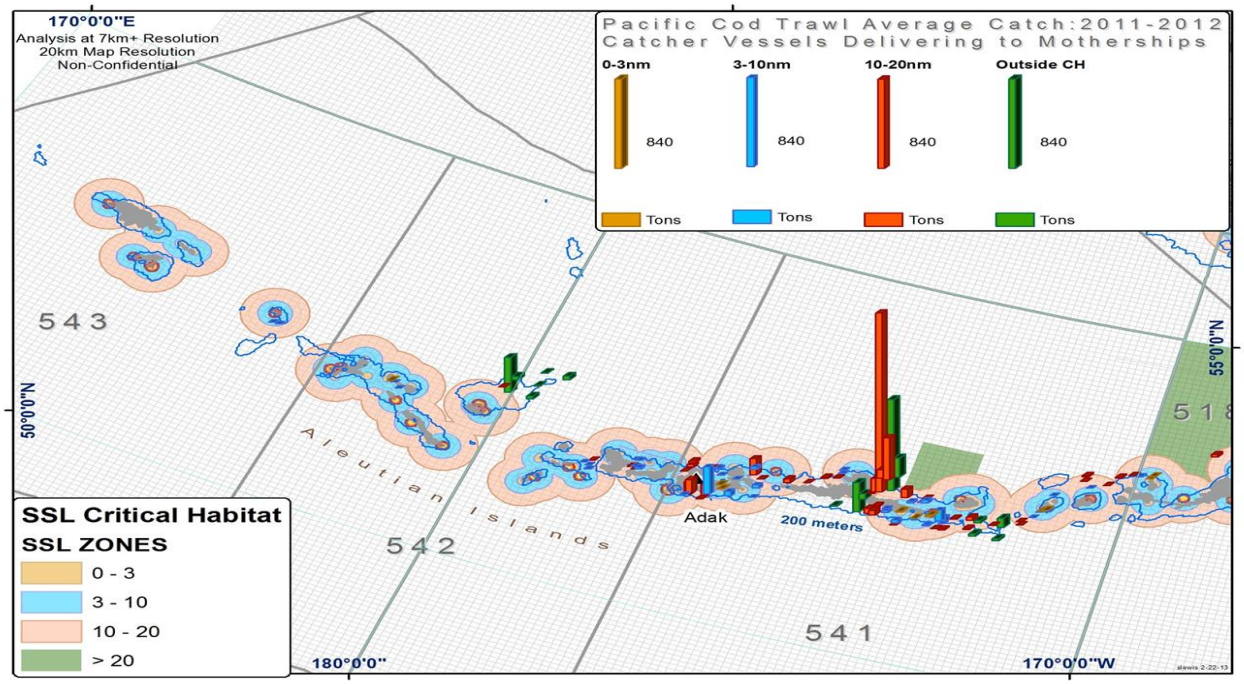


Figure 17 2011 through 2012 average location of Pacific cod harvested by trawl CVs delivering to motherships

Figure 18 shows the average location of harvest by non-trawl vessels from 2004 through 2010. Compared to trawl vessels, the catch by non-trawl vessels is not concentrated in several specific areas. Non-trawl catch seems to occur in all areas where depths are less than 200 m and fishing is allowed. As a result, the majority of catch by these vessels occurs in critical habitat.

Figure 19 shows where harvest occurred in 2011 and 2012 under regulations similar to Steller sea lion RPA. As a result, no fishing occurred in Area 543 and fishing concentrated more in Area 541 where the shelf edge is broader than other areas. The broader shelf edge gave the non-trawl vessels the area required to deploy their gear efficiently.

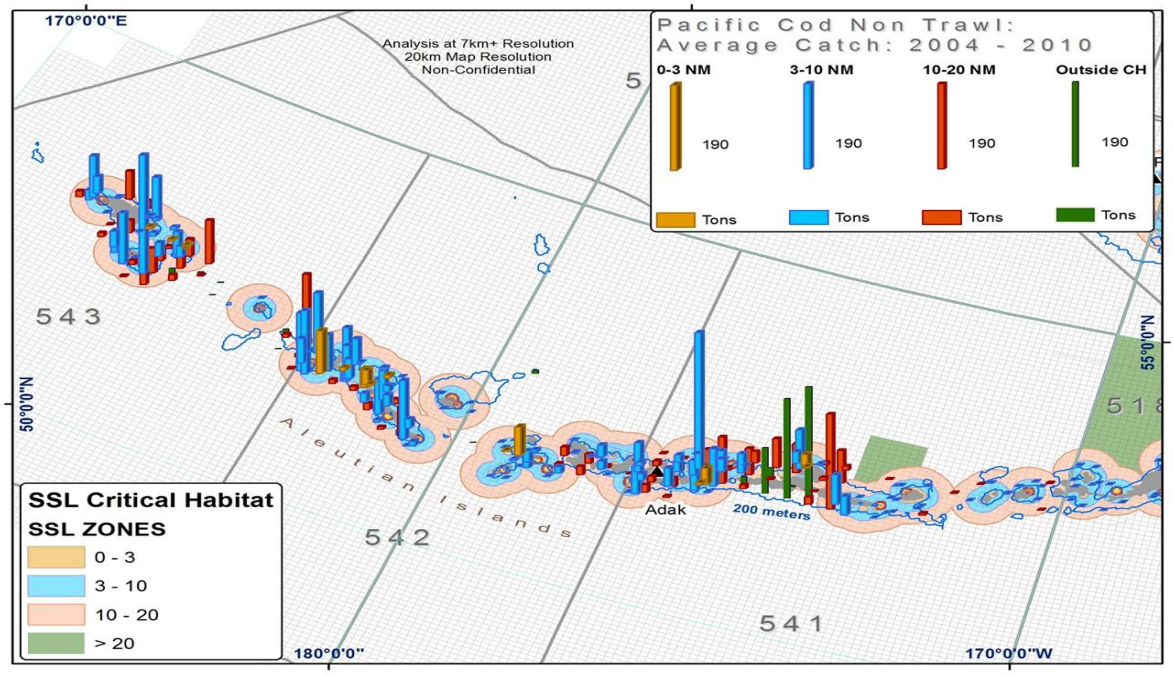


Figure 18 2004 through 2010 average location of Pacific cod harvested by non-trawl vessels (hook-and-line, pot, and jig gear)

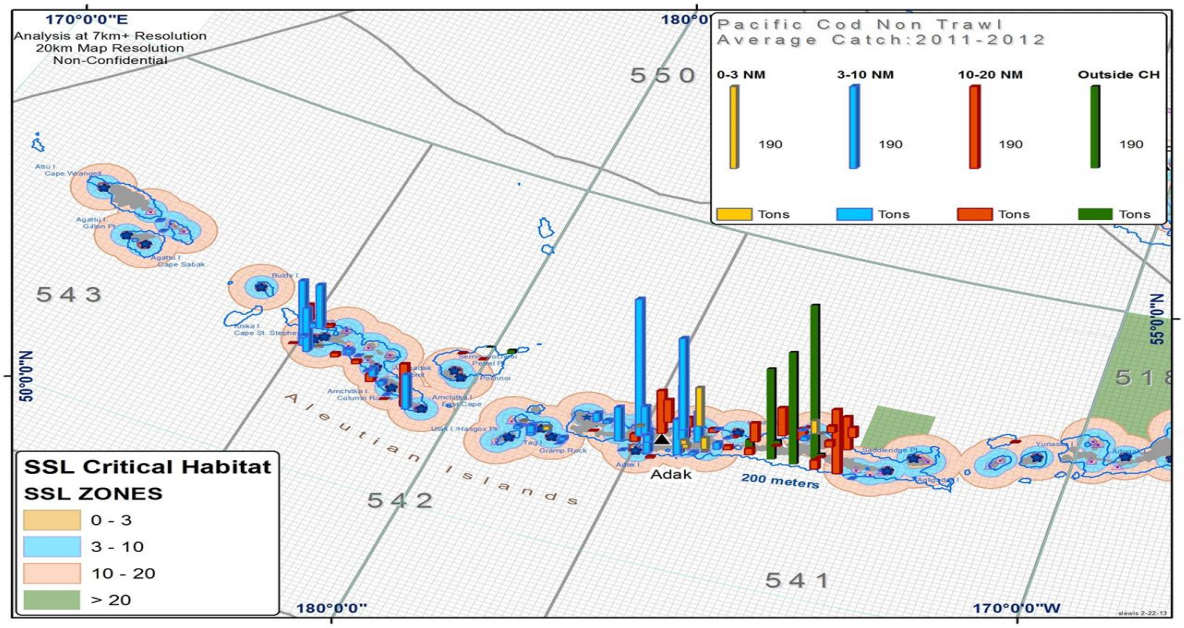


Figure 19 2011 through 2012 average location of Pacific cod harvested by non-trawl vessels (hook-and-line, pot, and jig gear)

3.5.2 Effects of the Alternatives

Effects of the action alternative on Pacific cod in the AI would be limited to changes in the location of harvest. Based on past fishing patterns of trawl CPs and trawl CVs operating in the AI, limiting the AI Pacific cod set-aside to CVs will result in reduced concentration of fishing in locations in Area 543 along the shelf north of Agattu Island and greater concentration of catch by trawl CVs in areas near the ports of Adak and Atka. Atka North Cape is the most important area to this sector and vessels harvesting fish in this area deliver to Adak. The area southeast of the port of Adak also is important to these vessels. Options 1 and 5 would likely increase dispersion of fishing away areas near the ports of Adak and Atka. In general though, the potential changes in harvest location as a result of the proposed action are not expected to impact Pacific cod stock status in the AI. The Pacific cod stock would not be overfished or experience overfishing because the current harvest specifications process for setting TACs and managing harvests within the limits would continue. Any potential impacts on prey availability and habitat are not likely to affect the sustainability of the Pacific cod stock.

3.6 Marine Mammals

Alaska supports one of the richest assemblages of marine mammals in the world. Twenty-two species are present from the orders Pinnipedia (seals and sea lions), Carnivora (sea otters), and Cetacea (whales, dolphins, and porpoises). Some marine mammal species are resident throughout the year, while others migrate into or out of Alaska fisheries management areas. Marine mammals occur in diverse habitats, including deep oceanic waters, the continental slope, and the continental shelf (Lowry et al. 1982).

A number of concerns may be related to marine mammals and potential impacts of fishing. For individual species, these concerns include—

- listing as endangered or threatened under the Endangered Species Act (ESA);
- protection under the Marine Mammal Protection Act (MMPA);
- declining populations in a manner of concern to State or Federal agencies;
- being vulnerable to direct or indirect adverse effects from some fishing activities.

Marine mammals have been given various levels of protection under the current fishery management plans of the Council, and are the subjects of continuing research and monitoring to further define the nature and extent of fishery impacts on these species. The Alaska groundfish harvest specifications environmental impact statement (NMFS 2007), the final environmental impact statement for Steller Sea Lion Protection Measures for the Bering Sea and Aleutian Islands Management Area Groundfish Fisheries (NMFS 2014b), and the Endangered Species Act Section 7 Consultation Biological Opinion on the Authorization of the Alaska groundfish fisheries under the proposed Steller sea lion protection measures (NMFS 2014) provide the most recent analysis of effects on marine mammals from the groundfish fisheries that may be impacted by the action. The most recent status information is available in the Marine Mammal Stock Assessment Reports (SARs) for each species (Allen and Angliss 2015). The effects descriptions in the harvest specifications EIS and the EIS for the Steller Sea Lion Protection Measures, and the status information in the 2014 SARsare incorporated by reference. Relevant information from these documents is summarized in this section, and more recent information is included.

Marine mammals, including those currently listed as endangered or threatened under the ESA, that may be present in the action area are listed in Table 3-3. All of these species are managed by NMFS, with the exception of Northern sea otters, which are managed by USFWS. ESA Section 7 consultations with respect to the actions of the Federal groundfish fisheries have been completed for all of the ESA-listed species, either individually or in groups. Four ESA-listed species in the action area may be adversely

affected by commercial groundfish fishing: Steller sea lions, humpback whales, fin whales, and sperm whales (NMFS 2010a).

Table 3-3 Marine mammals likely to occur in the Aleutian Islands subarea.

Common Name	Scientific Name	ESA Status
North Pacific Right Whale	*Balaena glacialis*	Endangered
Blue Whale	*Balaenoptera musculus*	Endangered
Fin Whale	*Balaenoptera physalus*	Endangered
Humpback Whale	*Megaptera novaeangliae*	Endangered
Sperm Whale	*Physeter macrocephalus*	Endangered
Steller Sea Lion[1]	*Eumetopias jubatus*	Endangered
Minke Whale	*Balaenoptera acutorostrata*	None
Killer Whale	*Orcinus orca*	None
Dall's Porpoise	*Phocoenoides dalli*	None
Harbor Porpoise	*Phocoena phocoena*	None
Pacific White-sided Dolphin	*Lagenorhynchus obliquidens*	None
Beaked Whales	*Berardius bairdii and Mesoplodon spp.*	None
Northern Fur Seal	*Callorhinus ursinus*	None
Pacific Harbor Seal	*Phoca vitulina*	None
Northern Sea Otter[2]	*Enhydra lutris*	Threatened
Ribbon Seal	*Phoca fasciata*	None

[1] Steller sea lions are listed as endangered west of Cape Suckling, 144° W longitude.
[2] Southwestern DPS of Northern sea otters are listed as threatened, and are under the jurisdiction of the USFWS.

The PSEIS (NMFS 2004) provides descriptions of the range, habitat, diet, abundance, and population status for marine mammals. SARs are prepared annually for the strategic marine mammal stocks (Steller sea lions, northern fur seals, harbor porpoise, North Pacific right whales, humpback whales, sperm whales, and fin whales)[15]. The SARs provide population estimates, population trends, and estimates of the potential biological removal (PBR) levels for each stock. The SARs also identify potential causes of mortality and whether the stock is considered a strategic stock under the MMPA. The information from the PSEIS and the SARs is incorporated by reference.

The Alaska Groundfish Harvest Specifications EIS provides information on the effects of the groundfish fisheries on marine mammals (NMFS 2007). This document is also incorporated by reference. Direct and indirect interactions between marine mammals and groundfish fishing vessels may occur due to overlap in the size and species of groundfish harvested in the fisheries that are also important marine mammal prey, and due to temporal and spatial overlap in marine mammal occurrence and commercial fishing activities. This discussion focuses on marine mammals species that may be affected by Pacific cod fisheries in the AI subarea. These species are listed in Table 3-4 and Table 3-5.

[15]The SARs are available on the NMFS Protected Resources Division website at http://www.nmfs.noaa.gov/pr/sars/region.htm.

Table 3-4 Status of Pinnipedia and Carnivora stocks potentially affected by the action.

Pinnipedia and Carnivora species and stock	Status under the ESA	Status under the MMPA	Population trends	Distribution in action area
Steller sea lion – Western (W) and Eastern (E) Distinct Population Segment (DPS)	Endangered (W)	Depleted & a strategic stock	For the WDPS, overall the population is increasing at an average rate of 1.67percent per year though trends vary across the range. The population is in steep decline in the Western AI (NMFS 2014b). The EDPS is steadily increasing and is delisted.	WDPS inhabits Alaska waters from Prince William Sound westward to the end of the Aleutian Island chain and into Russian waters. EDPS inhabit waters east of Prince William Sound to Dixon Entrance. Occur throughout AK waters, terrestrial haulouts and rookeries on Pribilof Islands, Aleutian Islands, St. Lawrence Island, and off the mainland. Use marine areas for foraging. Critical habitat designated around major rookeries, haulouts, and foraging areas.
Northern fur seal Eastern Pacific	None	Depleted & a strategic stock	Recent pup counts show a continuing decline in the number of pups surviving in the Pribilof Islands. NMFS researchers found an approximately 9percent decrease in the number of pups born between 2004 and 2006. The pup estimate decreased most sharply on St. Paul Island.	Fur seals occur throughout Alaska waters, but their main rookeries are located in the Bering Sea on Bogoslof Island and the Pribilof Islands. Approximately 55percent of the worldwide abundance of fur seals is found on the Pribilof Islands (NMFS 2007b). Forages in the pelagic area of the Bering Sea during summer breeding season, but most leave the Bering Sea in the fall to spend winter and spring in the N. Pacific.
Harbor seal – Gulf of Alaska	None	None	A moderate to large population decline has occurred in the GOA stock.	GOA stock found primarily in the coastal waters and may cross over into the Bering Sea coastal waters between islands.
Ribbon seal Alaska	None*	None	Reliable data on population trends are unavailable.	Widely dispersed throughout the Bering Sea and Aleutian Islands in the summer and fall. Associated with ice in spring and winter and may be associated with ice in summer and fall. Occasional movement into the GOA (Boveng et al. 2008)
Northern sea otters – SW Alaska	Threatened**	Depleted & a strategic stock	The overall population trend for the southwest Alaska stock is believed to be declining, particularly in the Aleutian Islands.	Coastal waters from Central GOA to W Aleutians within the 40 m depth contour. Critical habitat designated in primarily nearshore waters with few locations into federal waters in the GOA.

Sources: Allen and Angliss 2013; List of Fisheries for 2013 (78 FR 53336, August 29, 2013). Northern fur seal pup data available from http://www.alaskafisheries.noaa.gov/newsreleases/2007/fursealpups020207.htm.
*NMFS determined that ribbon seals were not to be listed on September 23, 2008. The Center for Biological Diversity and Greenpeace filed suit against NMFS regarding this decision on September 3, 2009.
**Northern sea otter information from http://www.nmfs.noaa.gov/pr/pdfs/sars/seaotter2008_ak_sw.pdf and 74 FR 51988, October 8, 2009.

Table 3-5 Status of Cetacea stocks potentially affected by the action.

Cetacea species and stock	Status under the ESA	Status under the MMPA	Population trends	Distribution in action area
Killer whale – AT1 Transient, E N Pacific transient, W Coast transient, Alaska resident, Southern resident	Southern resident endangered; remaining stocks none	AT1 depleted and a strategic stock, Southern Resident depleted. The rest of the stocks: None	Southern residents have declined by more than half since 1960s and 1970s. Unknown abundance for the Alaska resident; and Eastern North Pacific GOA, Aleutian Islands, and Bering Sea transient stocks. The minimum abundance estimate for the Eastern North Pacific Alaska Resident stock is likely underestimated because researchers continue to encounter new whales in the Alaskan waters.	Southern resident do not occur in GOA. Transient-type killer whales from the GOA, Aleutian Islands, and Bering Sea are considered to be part of a single population.
Dall's porpoise Alaska	None	None	Reliable data on population trends are unavailable.	Found in the offshore waters from coastal Western Alaska throughout the GOA.
Pacific white-sided dolphin	None	None	Reliable data on population trends are unavailable.	Found throughout the GOA.
Harbor porpoise GOA	None	Strategic	Reliable data on population trends are unavailable.	Primarily in coastal waters in the GOA, usually less than 100 m.
Humpback whale – Western and Central North Pacific	Endangered and under status review	Depleted & a strategic stock	Increasing. The Structure of Populations, Levels of Abundance, and Status of Humpbacks (SPLASH) abundance estimate for the North Pacific represents an annual increase of 4.9percent since 1991–1993. SPLASH abundance estimates for Hawaii show annual increases of 5.5percent to 6.0percent since 1991–1993 (Calambokidis et al. 2008).	W. Pacific and C. North Pacific stocks occur in GOA waters and may mingle in the North Pacific feeding area.
North Pacific right whale Eastern North Pacific	Endangered	Depleted & a strategic stock	This stock is considered to represent only a small fraction of its precommercial whaling abundance and is arguably the most endangered stock of large whales in the world. A reliable estimate of trend in abundance is currently not available.	Before commercial whaling on right whales, concentrations were found in the GOA, eastern Aleutian Islands, south-Central Bering Sea, Sea of Okhotsk, and Sea of Japan (Braham and Rice 1984). During 1965–1999, following large illegal catches by the U.S.S.R., there were only 82 sightings of right whales in the entire eastern North Pacific, with the majority of these occurring in the Bering Sea and adjacent areas of the Aleutian Islands (Brownell et al. 2001). Critical habitat near Kodiak Island in the GOA
Fin whale Northeast Pacific	Endangered	Depleted & a strategic stock	Abundance may be increasing but surveys only provide abundance information for portions of the stock in the Central-eastern and southeastern Bering and coastal waters of the Aleutian Islands and the Alaska Peninsula. Much of the North Pacific range has not been surveyed.	Found in the GOA, Bering Sea and coastal waters of the Aleutian Islands.

Cetacea species and stock	Status under the ESA	Status under the MMPA	Population trends	Distribution in action area
Beluga whale-Cook Inlet	Endangered	Depleted & a strategic stock	2008 abundance estimate of 375 whales is unchanged from 2007. Trend from 1999 to 2008 is not significantly different from zero.	Occurrence only in Cook Inlet.
Minke whale Alaska	None	None	There are no data on trends in Minke whale abundance in Alaska waters.	Common in the Bering and Chukchi Seas and in the inshore waters of the GOA. Not common in the Aleutian Islands.
Sperm whale North Pacific	Endangered	Depleted & a strategic stock	Abundance and population trends in Alaska waters are unknown.	Inhabit waters 600 m or more depth, south of 62°N lat. Widely distributed in North Pacific. Found year-round In GOA.
Baird's, Cuvier's, and Stejneger's beaked whale	None	None	Reliable data on population trends are unavailable.	Occur throughout the GOA.

Sources: Allen and Angliss 2013; List of Fisheries for 2013 (78 FR 53336, August 29, 2013); http://www.nmfs.noaa.gov/pr/species/mammals/cetaceans/spermwhale.htm. North Pacific right whale included based on NMFS (2006a) and Salveson (2008). AT1 Killer Whales information based on 69 FR 31321, June 3, 2004. North Pacific Right Whale critical habitat information: 73 FR 19000, April 8, 2008. For beluga whales: 73 FR 62919, October 27, 2008.

In 2015, NMFS implemented revised Steller sea lion protection measures in the Atka mackerel, Pacific cod, and pollock fisheries in Ai fishery management areas 543, 542, and 541 (79 FR 70286) to ensure the fisheries were not likely to jeopardize the continued existence of the western DPS of Steller sea lions or adversely modify designated critical habitat. These protection measures would remain in place regardless of the alternatives selected in this action.

3.6.1 Effects on Marine Mammals

3.6.1.1 Significant Criteria for Marine Mammals

Table 3-6 contains the significance criteria for analyzing the effects of the proposed action on marine mammals. Significantly beneficial impacts are not possible with the management of groundfish fisheries as no beneficial impacts to marine mammals are likely with groundfish harvest. Generally, changes to the fisheries do not benefit marine mammals in relation to incidental take, prey availability, and disturbances; changes increase or decrease potential adverse impacts. The only exception to this may be in instances when marine mammals target prey from fishing gear, as seen with killer whales and sperm whales removing fish from hook-and-line gear. In this example, the prey availability is enhanced for these animals because they need less energy for foraging.

Table 3-6 Criteria for determining significance of impacts to marine mammals

	Incidental take and entanglement in marine debris	Prey availability	Disturbance
Adverse impact	Mammals are taken incidentally to fishing operations or become entangled in marine debris.	Fisheries reduce the availability of marine mammal prey.	Fishing operations disturb marine mammals.
Beneficial impact	There is no beneficial impact.	Generally, there are no beneficial impacts.	There is no beneficial impact.
Significantly adverse impact	Incidental take is more than PBR or is considered major in relation to estimated population when PBR is undefined.	Competition for key prey species likely to constrain foraging success of marine mammal species causing population decline.	Disturbance of mammal is such that population is likely to decrease.
Significantly beneficial impact	Not applicable	Not applicable	Not applicable
Unknown impact	Insufficient information available on take rates.	Insufficient information as to what constitutes a key area or important time of year.	Insufficient information as to what constitutes disturbance.

3.6.1.2 Incidental Take Effects

The Alaska Groundfish Harvest Specifications EIS contains a detailed description of the incidental take effects of the groundfish fisheries on marine mammals (chapter 8 in NMFS 2007) and is incorporated by reference. Marine mammals can be taken in groundfish fisheries by entanglement in gear (e.g., trawl, longline, and pot) and, rarely, by ship strikes for some cetaceans. Table 3-4 lists the Pinnipedia and Carnivora stocks potentially affected by this action and Table 3-5 lists Cetacea stocks potentially affected by this action .

The Marine Mammal Protection Act requires NMFS to publish, annually, a list of fisheries (LOF), which classifies each U.S. commercial fishery by the level of serious injury and mortality of marine mammals that occurs incidental to each fishery. The 2015 LOF is based on the 2013 Marine Mammal Stock Assessment Reports, which include data through 2011.

Currently, the BSAI Pacific cod trawl and AI Pacific cod longline fisheries are listed as Category III fisheries based on annual mortality and serious injury of a marine mammal stock being less than or equal to 1 percent of the potential biological removal (PBR) level (79 FR 77927).

The proposed action alternative may change the spatial distribution of Pacific cod harvest in the AI. Based on past fishing patterns of trawl CPs and trawl CVs operating in the AI, limiting the AI Pacific cod set-aside to CVs would reduce concentration of Pacific cod fishing in Area 543 along the shelf north of Agattu Island and increase Pacific cod fishing by trawl CVs in areas near the ports of Adak and Atka.

Marine mammals are rarely taken incidental to AI Pacific cod fisheries. On average, from 2007 through 2011, less than one marine mammal per year was killed incidental to the AI Pacific cod fisheries (Table 3-7). Due to the rare and seemingly random nature of these incidental takes, the best available data indicate that any changes in the spatial distribution of the AI Pacific cod fisheries, resulting from a set-aside of AI Pacific cod for CVs, are unlikely to change the rate of marine mammal interactions in the AI Pacific cod fishery. In other words, the proposed action alternative is not likely to result in a net change in marine mammal interactions relative to the status quo.

Table 3-7 Mean annual mortality rate of marine mammal species incidentally taken the in the AI Pacific cod trawl fishery and the BSAI Pacific cod longline fishery based on data from 2007 through 2011. Source: Allen and Angliss 2015.

Trawl	Ringed Seal	0.2 (CV = 0.01)
	Steller sea lion	0.4 (CV = 0.06)
Longline	Dall's Porpoise	0.38 (CV = 0.67)
	Northern Fur Seal	0.28 (CV = .52)
	Ringed Seal	0.32 (CV = 0.6)

3.6.1.3 Harvest of Prey Species Effects

The Steller Sea Lion Protection Measures EIS (NMFS 2014b) describes effects of groundfish fishery harvest on marine mammal prey species and their habitat and is incorporated by reference.

The AI Pacific cod fisheries were modified in 2014 (the BSAI ABC and TAC were split into separate BS and AI ABCs and TACs) and 2015 (implementation of revised Steller sea lion protection measures) to conserve Pacific cod stocks and the western DPS of Steller sea lions. These modifications further reduce potential adverse effects of the fisheries on marine mammal populations including Steller sea lions. In addition to these recent changes in the AI Pacific cod fishery, the proposed action alternative would likely change the overall AI Pacific cod harvest spatial distribution. Based on past fishing patterns of trawl CPs and trawl CVs operating in the AI (see Figure 12, Figure 13, Figure 14, Figure 15, Figure 16, Figure 17, Figure 18, and Figure 19), limiting the AI Pacific cod set-aside to CVs delivering to AI shoreplants would reduce fishing in locations frequented by CPs and CVs that deliver to motherships and increase fishing near Adak and Atka. The Steller sea lion population in fishery management area 543 continues to decline in abundance at a steep rate (NMFS 2014). The cause for the continued population decline is unknown, however, Pacific cod are an important sea lion prey species in the AI and numerous restrictions have been implemented to ensure the Pacific cod fisheries do not jeopardize the continued existence of the western DPS of Steller sea lions by competing with the sea lions for prey. The proposed action alternative would further reduce any potential effects of the fisheries on the declining sea lion population in area 543 if the Pacific cod harvest was taken by CVs close to Adak and Atka where sea lion populations have been increasing, even with ongoing Pacific cod fishing in excess of that expected under the proposed action alternative. The proposed action alternative would likely result in similar effects on prey species for other marine mammals as the status quo (see NMFS 2014b).

3.6.1.4 Disturbance Effects on Marine Mammals

The action alternative effects on Pacific cod in the AI would be limited to changes in the location of harvest. Based on past fishing patterns of trawl CPs and trawl CVs operating in the AI, limiting the AI Pacific cod set-aside to CVs will result in reduced concentration of fishing in locations in Area 543 along the shelf north of Agattu Island and greater concentration of catch by trawl CVs in areas near the ports of Adak and Atka. This change in harvest location likely reduces the potential for disturbance of marine mammals in fishing areas frequented by CPs and CVs delivering AI Pacific cod to motherships (see Figure 12, Figure 13, Figure 16, and Figure 17) and increases the potential for incidental takes of marine mammals in fishing areas frequented by CVs delivering to shoreplants (see Figure 14 and Figure 15). The 2014 Aleutian Islands Groundfish Fishery Biological Opinion (NMFS 2014c) evaluated the protection measures that will be enacted on January 1 2015, and concluded that the groundfish fisheries were not likely to cause jeopardy to the WDPS of Steller sea lions, nor cause adverse modification to designated critical habitat. Because these protection measures will remain in place, the effects of the fisheries on disturbance of Steller sea lions are not likely to be significant.

3.7 Cumulative Effects

NEPA requires an analysis of the potential cumulative effects of a proposed federal action and its alternatives. Cumulative effects are those combined effects on the quality of the human environment that result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of which federal or non-federal agency or person undertakes such other actions (40 CFR 1508.7, 1508.25(a) and 1508.25(c)). Cumulative impacts can result from individually minor, but collectively significant, actions taking place over a period of time. The concept behind cumulative effects analysis is to capture the total effects of many actions over time that would be missed if evaluating each action individually. Concurrently, the Council on Environmental Quality (CEQ) guidelines recognize that it is most practical to focus cumulative effects analysis on only those effects that are truly meaningful. Based on the preceding analysis, the effects that are meaningful are potential effects on [specify which resource components]. The cumulative effects on the other resources have been analyzed in numerous documents and the impacts of this proposed action and alternatives on those resources is minimal, therefore there is no need to conduct an additional cumulative impacts analysis.

This EA analyzes the cumulative effects of each alternative and the effects of past, present, and reasonably foreseeable future actions (RFFA). The past and present actions are described in the previous sections in this chapter.

This section provides a review of the RFFA that may result in cumulative effects on [specify which resource components]. Actions are understood to be human actions (e.g., a proposed rule to designate northern right whale critical habitat in the Pacific Ocean), as distinguished from natural events (e.g., an ecological regime shift). CEQ regulations require consideration of actions, whether taken by a government or by private persons that are reasonably foreseeable. This requirement is interpreted to indicate actions that are more than merely possible or speculative. In addition to these actions, this cumulative effects analysis includes climate change.

Actions are considered reasonably foreseeable if some concrete step has been taken toward implementation, such as a Council recommendation or NMFS's publication of a proposed rule. Actions only "under consideration" have not generally been included because they may change substantially or may not be adopted, and so cannot be reasonably described, predicted, or foreseen. Identification of actions likely to impact a resource component within this action's area and time frame will allow the public and Council to make a reasoned choice among alternatives.

Effective for the 2015 fishing year, NMFS implemented a comprehensive suite of Steller sea lion protection measures. The protection measures apply to vessels fishing in the Atka mackerel, Pacific cod, and pollock fisheries in the AI. Steller sea lion protection measures regulate fishing by applying a combination of closed areas, harvest limits, and seasons that reduce fishery competition for Steller sea lion prey when and where Steller sea lions forage. Since these protections measures limit commercial fishing for AI Pacific cod via closed areas, harvest limits, and seasons, this section includes a description of these most recent protection measures, the time-line for development of these new measures, and a summary of the effects of those measures on the AI Pacific cod and pollock fishery for purpose of background for the proposed action.

From January 1, 2011 to January 1, 2015, the groundfish fisheries in the AI had been managed under the 2011 Steller sea lion protection measures (75 FR 77535, December 13, 2010), corrected 75 FR 81921, December 29, 2010). The Environmental Assessment for the Revisions to the Steller Sea Lion Protection

Measures (NMFS 2010b) contains a summary of the management measures for Pacific cod and Atka mackerel.

On March 5, 2012, NMFS was ordered by the U.S. District Court of Alaska to prepare an EIS on the Steller sea lion protection measures implemented in January 2011. The Court ordered NMFS to prepare an EIS for the Steller sea lion protection measures, because NMFS had failed to provide sufficient environmental information for informed public comment to the agency decision-making when it prepared the environmental assessment for this action in 2010, and failed to provide for adequate public participation. The Court ordered the completion of the final EIS by March 2, 2014. The Court also ordered that any subsequent rulemaking for the BSAI groundfish fisheries as a result of the EIS must be completed by January 1, 2015.

At its April 2012 meeting, the Council chose to reconvene its Steller Sea Lion Mitigation Committee. This committee met repeatedly during the spring, summer, and fall of 2012, and proposed two new alternatives to the Council at its December 2012 meeting. At that meeting, the Council adopted a statement of purpose and need, and recommended a suite of four alternatives for evaluation in the EIS. Following the Council's meeting, NMFS reviewed the alternatives in light of the statement of purpose and need, and the requirements of the ESA and National Environmental Policy Act, and adopted a set of five alternatives and a protection option for analysis in the EIS. These alternatives are described in detail in Chapter 2 of the May 2014 EIS (NMFS, 2014).

In April 2013, the Council recommended Alternative 5 as the preliminary preferred alternative for the public's consideration during review and comment period on the draft Steller sea lion EIS and to provide a proposed action that could be analyzed in the ESA Section 7 consultation. The features of the Alternative 5 specific to Pacific cod and pollock are as follows:

In April 2014, NMFS completed the 2014 BiOp on the Alternative 5 and found that these protection measures insure the fisheries are not likely to jeopardize the continued existence or adversely modify or destroy critical habitat for the WDPS of Steller sea lions. Based on this ESA determination, Alternative 5 is also NMFS's preferred alternative.

The features of the Alternative 5 specific to Pacific cod are as follows:

- Establish seasonal apportionments based on the BSAI-wide TAC, as required under Amendment 85
- Set the seasons as follows:
    - Non-trawl gear:
        - Hook and line:
            - A season: 1/1—6/10
            - B season: 6/10—12/31
        - Pot:
            - A season: 1/1—6/10
            - B season:9/1—12/31
        - Jig
            - A season: 1/1—4/30
            - B season: 4/30—8/31
            - C season: 8/31—12/31
    - Trawl CVs and AFA CPs:

    - A season: 1/20—4/1
    - B season: 4/1—6/10
    - C season: 6/10-11/1
  - CDQ trawl and Amendment 80
    - A season: 1/20—4/1
    - B season: 4/1—6/10
    - C season: 6/10—12/31

Area 543

- Remove the area-wide retention prohibition
- Establish a catch limit for Pacific cod based on abundance in Area 543 as determined by the annual stock assessment process.
- Prohibited directed fishing for Pacific cod in waters 0—3 nm of haulouts and 0—10 nm of rookeries by trawl gear vessels (Figure 20).
- Prohibit directed fishing for Pacific cod in waters 0—3 nm from haulouts and 0—10 nm Buldir Island for hook-and-line and pot vessels (Figure 21).

Area 542

- Prohibit directed fishing for Pacific cod with trawl gear in waters 0-3 nm from haulouts and 0-10 nm from rookeries (Figure 20).
- Prohibit directed fishing for Pacific cod with hook-and-line and pot in waters 0-3 nm from rookeries (Figure 21).

Area 541

- Prohibit directed fishing for Pacific cod in the Seguam foraging area with hook-and-line, pot, jig, and trawl gears (Figure 20 and Figure 21).
- Prohibit directed fishing for Pacific cod with trawl gear in waters 0-3 nm from haulouts and 0-10 nm from rookeries, except prohibit directed fishing for Pacific cod with trawl gear in waters 0-20 nm from Agligadak (Figure 20).
- Prohibit directed fishing for Pacific cod with hook-and-line and pot gear in waters 0-3 nm from rookeries west of 172.59° W long. and in critical habitat east of 172.59° W long (Figure 21).

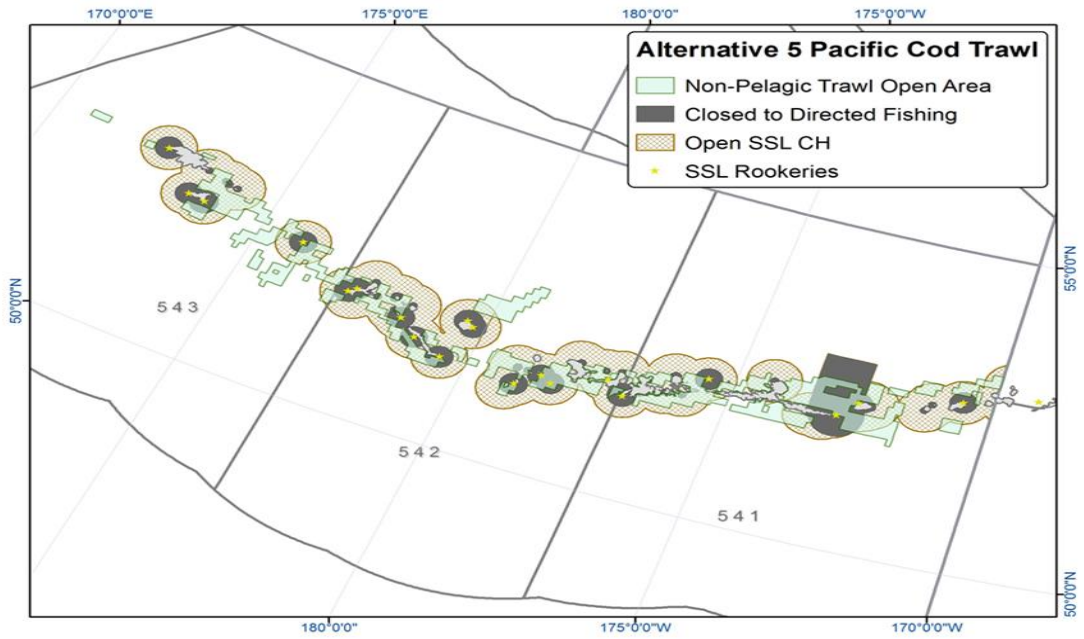


Figure 20 Pacific cod trawl closures under Alternative 5

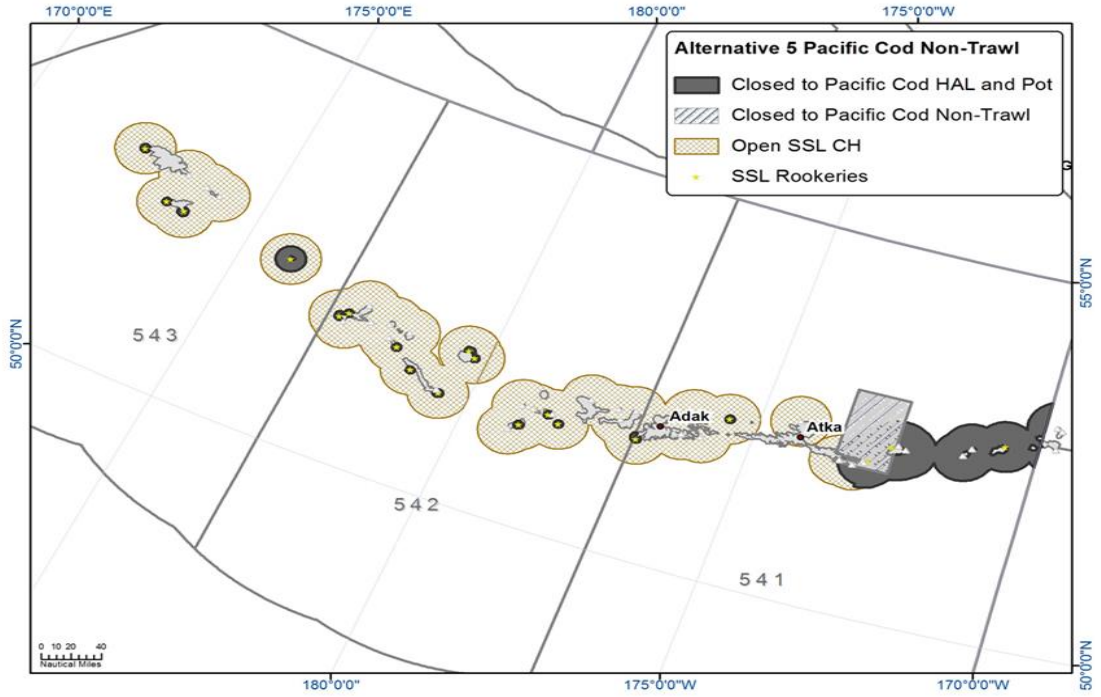


Figure 21 Pacific cod non-trawl closures under Alternative 5

The following is a brief summary of the effects of the Council selected preferred alternative specific to the AI Pacific cod fishery that was provided in the May 2014 Final EIS for Steller sea lion protection measures.

For trawl CPs and CVs, the average annual gross revenues would likely increase, while the extended C-season end date for Amendment 80 trawl vessels and those fishing Pacific cod CDQ, from November 1 to December 31would help address potential regulatory discards after November 1. This change in closing dates may affect reallocation of Pacific cod later in the year, if a trawl CV fishery becomes viable at that time.

For non-trawl CPs and CVs, the change in average gross revenues between status quo and preferred alternative are not enough to make it possible to discriminate between. The non-trawl CP fleet is currently prohibited from directed fishing for Pacific cod in the Aleutian Island after November 1, but the preferred alternative will relax this November 1 season end date and allow directed fishing until the end of the year. The freezer-longline portion of this sector operates under a voluntary cooperative and directed fishing for Pacific cod in the BSAI last all year. The relaxation of this season end date would allow some of this fishing to occur after November 1 in the Aleutian Islands. However, during periods of low AI TAC, this season date extension is unlikely to be advantage for the sector. It is also unlikely to be of advantage to the pot portion of this sector, as these vessels typically close directed fishing prior to November 1. For CVs, the extension of the fishing season until the end of the year would have little impact on this group of vessels, which typically does not operate in the AI in the late fall.

From a community perspective, Adak is the community likely to be most impacted by the preferred alternative. Atka, the only other AI community, is not as involved with the Pacific cod fishery, so the impacts from the preferred alternative are likely more long term as Atka completes its ongoing infrastructure improvements, which will facilitate increased participation in the Pacific cod fishery. The preferred alternative will likely to be associated with more port visits to Adak, and associated sales of goods and services relative to the current Steller sea lion protection measures.

4 Initial Regulatory Flexibility Analysis

4.1 Introduction

This Initial Regulatory Flexibility Analysis (IRFA) addresses the statutory requirements of the Regulatory Flexibility Act (RFA) of 1980, as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (5 U.S.C. 601-612). This IRFA evaluates the potential adverse economic impacts on small entities directly regulated by the proposed action.

The RFA, first enacted in 1980, was designed to place the burden on the government to review all regulations to ensure that, while accomplishing their intended purposes, they do not unduly inhibit the ability of small entities to compete. The RFA recognizes that the size of a business, unit of government, or nonprofit organization frequently has a bearing on its ability to comply with a federal regulation. Major goals of the RFA are: (1) to increase agency awareness and understanding of the impact of their regulations on small business, (2) to require that agencies communicate and explain their findings to the public, and (3) to encourage agencies to use flexibility and to provide regulatory relief to small entities.

The RFA emphasizes predicting significant adverse economic impacts on small entities as a group distinct from other entities, and on the consideration of alternatives that may minimize adverse economic impacts, while still achieving the stated objective of the action. When an agency publishes a proposed rule, it must either 'certify' that the action will not have a significant adverse economic impact on a substantial number of small entities, and support that certification with the 'factual basis' upon which the decision is based; or it must prepare and make available for public review an IRFA. When an agency publishes a final rule, it must prepare a Final Regulatory Flexibility Analysis, unless, based on public comment, it chooses to certify the action.

In determining the scope, or 'universe', of the entities to be considered in an IRFA, NMFS generally includes only those entities that are directly regulated by the proposed action. If the effects of the rule fall primarily on a distinct segment, or portion thereof, of the industry (e.g., user group, gear type, geographic area), that segment would be considered the universe for the purpose of this analysis.

4.2 IRFA Requirements

Until the North Pacific Fishery Management Council (Council) makes a final decision on a preferred alternative, a definitive assessment of the proposed management alternatives cannot be conducted. In order to allow the agency to make a certification decision, or to satisfy the requirements of an IRFA of the preferred alternative, this section addresses the requirements for an IRFA. Under 5 U.S.C., section 603(b) of the RFA, each IRFA is required to contain:

- A description of the reasons why action by the agency is being considered;
- A succinct statement of the objectives of, and the legal basis for, the proposed rule;
- A description of and, where feasible, an estimate of the number of small entities to which the proposed rule will apply (including a profile of the industry divided into industry segments, if appropriate);
- A description of the projected reporting, record keeping, and other compliance requirements of the proposed rule, including an estimate of the classes of small entities that will be subject to the requirement and the type of professional skills necessary for preparation of the report or record;
- An identification, to the extent practicable, of all relevant federal rules that may duplicate, overlap, or conflict with the proposed rule;

- A description of any significant alternatives to the proposed rule that accomplish the stated objectives of the proposed action, consistent with applicable statutes, and that would minimize any significant economic impact of the proposed rule on small entities. Consistent with the stated objectives of applicable statutes, the analysis shall discuss significant alternatives, such as:

    1. The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;
    2. The clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;
    3. The use of performance rather than design standards;
    4. An exemption from coverage of the rule, or any part thereof, for such small entities.

In preparing an IRFA, an agency may provide either a quantifiable or numerical description of the effects of a proposed action (and alternatives to the proposed action), or more general descriptive statements, if quantification is not practicable or reliable.

4.3 Definition of a Small Entity

The RFA recognizes and defines three kinds of small entities: (1) small businesses, (2) small non-profit organizations, and (3) small government jurisdictions.

Small businesses. Section 601(3) of the RFA defines a 'small business' as having the same meaning as 'small business concern', which is defined under Section 3 of the Small Business Act (SBA). 'Small business' or 'small business concern' includes any firm that is independently owned and operated and not dominant in its field of operation. The SBA has further defined a "small business concern" as one "organized for profit, with a place of business located in the United States, and which operates primarily within the United States or which makes a significant contribution to the U.S. economy through payment of taxes or use of American products, materials or labor…A small business concern may be in the legal form of an individual proprietorship, partnership, limited liability company, corporation, joint venture, association, trust or cooperative, except that where the firm is a joint venture there can be no more than 49 percent participation by foreign business entities in the joint venture."

The SBA has established size criteria for all major industry sectors in the United States, including fish harvesting and fish processing businesses. Effective July 22, 2013, a business involved in *finfish harvesting* is a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has combined annual gross receipts not in excess of $20.5 million for all its affiliated operations worldwide. A business involved in *shellfish harvesting* is a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has combined annual gross receipts not in excess of $5.5 million for all its affiliated operations worldwide. A *seafood processor* is a small business if it is independently owned and operated, not dominant in its field of operation, and employs 500 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide. A business that *both harvests and processes* fish (i.e., a catcher/processor) is a small business if it meets the criteria for the applicable fish harvesting operation (i.e., finfish or shellfish). A wholesale business servicing the fishing industry is a small business if it employs 100 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide.

The SBA has established "principles of affiliation" to determine whether a business concern is "independently owned and operated." In general, business concerns are affiliates of each other when one

concern controls or has the power to control the other, or a third party controls or has the power to control both. The SBA considers factors such as ownership, management, previous relationships with or ties to another concern, and contractual relationships, in determining whether affiliation exists. Individuals or firms that have identical or substantially identical business or economic interests, such as family members, persons with common investments, or firms that are economically dependent through contractual or other relationships, are treated as one party with such interests aggregated when measuring the size of the concern in question. The SBA counts the receipts or employees of the concern whose size is at issue and those of all its domestic and foreign affiliates, regardless of whether the affiliates are organized for profit, in determining the concern's size. However, business concerns owned and controlled by Indian Tribes, Alaska Regional or Village Corporations organized pursuant to the Alaska Native Claims Settlement Act (43 U.S.C. 1601), Native Hawaiian Organizations, or Community Development Corporations authorized by 42 U.S.C. 9805 are not considered affiliates of such entities, or with other concerns owned by these entities solely because of their common ownership.

Affiliation may be based on stock ownership when (1) a person is an affiliate of a concern if the person owns or controls, or has the power to control 50 percent or more of its voting stock, or a block of stock which affords control because it is large compared to other outstanding blocks of stock, or (2) if two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, with minority holdings that are equal or approximately equal in size, but the aggregate of these minority holdings is large as compared with any other stock holding, each such person is presumed to be an affiliate of the concern.

Affiliation may be based on common management or joint venture arrangements. Affiliation arises where one or more officers, directors, or general partners, controls the board of directors and/or the management of another concern. Parties to a joint venture also may be affiliates. A contractor and subcontractor are treated as joint venturers if the ostensible subcontractor will perform primary and vital requirements of a contract or if the prime contractor is unusually reliant upon the ostensible subcontractor. All requirements of the contract are considered in reviewing such relationship, including contract management, technical responsibilities, and the percentage of subcontracted work.

Small organizations. The RFA defines "small organizations" as any not-for-profit enterprise that is independently owned and operated, and is not dominant in its field.

Small governmental jurisdictions. The RFA defines "small governmental jurisdictions" as governments of cities, counties, towns, townships, villages, school districts, or special districts with populations of fewer than 50,000.

4.4 Reason for Considering the Proposed Action

Since April 2008, the Council has been evaluating the need for community protections in the AI due to the implementation of rationalization programs for various fisheries. This rationalization has resulted in excess processing capacity that has been used in the AI Pacific cod fishery. The specific rationalization programs are American Fisheries Act (AFA), Bering Sea and Aleutian Islands (BSAI) crab rationalization, and BSAI Amendment 80. These programs provide benefits to processing vessels and afford opportunities for consolidation, thus, freeing some processing capacity to target and process the non-rationalized BSAI Pacific cod fishery.

In December 2013, the Council adopted separate TACs for the BS and AI populations of Pacific cod. This action was tied to concerns about the declining AI Pacific cod population. The 2014 BS Pacific cod TAC was set at 246,897 mt and the AI Pacific cod TAC was set at 6,997 mt. The TAC for the AI is

significantly lower than what was anticipated several years ago, and it is not anticipated that TAC for AI Pacific cod will increase in the near-term. Affected by these changes in the AI Pacific cod fishery are two shoreplants in the AI, and the communities these shoreplants are located critically depend on those shoreplants. Primary amongst these shoreplants is the one located in Adak, which in the past received a vast majority of the AI cod landings from both the state and Federal AI Pacific cod fisheries (see Table 2-25 and Table 2-32). In the past, Pacific cod deliveries to the Adak shoreplant alone were in the 6,000 mt to 10,000 mt range. As the AI TAC is now set separately and is relatively low, the risk of processing vessels with excess processing capacity closing the AI Pacific cod fishery earlier and eroding the historical share of AI Pacific cod processed by the Adak shoreplant processor is very high.

Given the increased participation in the AI Pacific cod fishery by the rationalized sectors, the Pacific cod TAC split for the BS and AI that was implemented in 2014, and the new Steller sea lion protection measures implemented in 2015, the Council adopted a problem statement to initiate the proposed action at the February 2014 Council meeting. Consideration of this action to provide some stability to AI shoreplant operations and AI communities is consistent with the Council's objectives for this action.

In February 2015, the problem statement was modified to include the Council's concern of the continued risk of increased processing participation by rationalized sectors in the non-rationalized AI cod fishery, which was the original reason the Council began focusing on AI shoreplant processor stability in 2008. The problem statement was also modified in February 2015 to account for the impacts to the AI shoreplant processors and communities and the need for community protections as a result of the recent BS and AI Pacific cod total allowable catch split and relatively low Pacific cod stock abundance in the AI. The following is the adopted problem statement for this proposed action:

> *The American Fisheries Act, BSAI Crab Rationalization, and BSAI Amendment 80 management programs provided benefits to processing vessels that were intended to protect their investments in, and dependence on, the respective fishery resources. Each of these programs has also afforded participants opportunities for consolidation, allowing for increased participation in the non-rationalized BSAI Pacific cod fishery in the Aleutian Islands, thus increasing the risk that the historical share of BSAI cod of other industry participants and communities that depend on shoreplant processing in the region may be diminished. The BSAI cod TAC split and relatively low Pacific cod stock abundance in the Aleutian Islands further increase the need for community protections.*

4.5 Objectives of Proposed Action and its Legal Basis

Under the authority of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the Secretary of Commerce (NMFS Alaska Regional Office) and the North Pacific Fishery Management Council have the responsibility to prepare fishery management plans and associated regulations for the marine resources found to require conservation and management. NMFS is charged with carrying out the Federal mandates of the Department of Commerce with regard to marine fish, including the publication of Federal regulations. The Alaska Regional Office of NMFS, and Alaska Fisheries Science Center, research, draft, and support the management actions recommended by the Council. The Bering Sea and Aleutian Islands (BSAI) groundfish fisheries are managed under the Fishery Management Plan for Groundfish of the BSAI Management Area. The proposed action represents an amendment, as required, to the fishery management plan, as well as amendments to associated Federal regulations.

Two principal objectives of the FMP amendment and proposed regulations are, (1) to prioritize a portion of the AI Pacific cod set-aside for delivery to shoreplants in the AI management area, consistent with

National Standard 8 of the Magnuson-Stevens Act, and (2) to enable Pacific cod harvests to contribute to the achievement of optimum yield on a continuing basis in the AI groundfish fishery, consistent with National Standard 1 of the Magnuson-Stevens Act.

4.6 Number and Description of Directly Regulated Small Entities

This section provides estimates of the number of harvesting vessels that are considered small entities. These estimates may overstate the number of small entities (and conversely, understate the number of large entities). The RFA requires a consideration of affiliations between entities for the purpose of assessing if an entity is small. The estimates, at present, do not take into account all affiliations between entities, owing to data limitations. There is not a strict one-to-one correlation between vessels and entities; many persons and firms are known to have ownership interests in more than one vessel, and many of these vessels with different ownership, are otherwise affiliated with each other. For example, vessels in the American Fisheries Act (AFA) CV sectors are categorized as "large entities" for the purpose of the RFA under the principles of affiliation, due to their being part of the AFA pollock cooperatives. However, vessels that have other types of affiliation, (i.e., ownership of multiple vessel or affiliation with processors), not tracked in available data, may be misclassified as a small entity.

The entities directly regulated by this action are those entities that participate in harvesting of groundfish from the Federal or parallel Pacific cod target fisheries of the Aleutian Islands. It does not include entities that only harvest Pacific cod from a State waters GHL fishery in the Aleutian Islands.

From 2012 through 2014, there were 29 CVs that are considered small entities that would have been directly regulated by the proposed action. Fishing vessels are considered small entities if their total annual gross receipts, from all their activities, and those of all affiliates combined, are less than $20.5 million. There were 10 CVs that fished for Pacific cod in the AI during 2012 through 2014 that are considered large entities.

4.7 Recordkeeping and Reporting Requirements

Under Alternative 2, NMFS would track CV catch of AI Pacific cod using existing reporting methods. Currently, CVs are required to report that catch using eLandings (Interagency Electronic Reporting System). These reports require that vessels delivering catch report the State of Alaska statistical areas where the catch occurred. NMFS can determine the management area where catch occurred from these statistical area reports, verify the catch was from a CV, and determine if the landing was delivered to an AI shore-based processor. NMFS would continue to sum all directed Pacific cod landings by CVs and delivered to all AI shore-based processors and close the fishery as necessary when the limit has been reached.

Looking at the option to limit the amount of A season trawl CV Pacific cod harvest in the BS, this option appears manageable from NMFS's perspective, but this proposed limitation on harvest in the BS is splitting the BS TACs for Pacific cod into smaller portions which increases the burden on the management agency.

4.8 Federal Rules that may Duplicate, Overlap, or Conflict with Proposed Action

No relevant Federal rules have been identified that would duplicate or overlap with the proposed action. Some current Federal regulations would need modification to implement the proposed action. These

regulatory changes are described in detail in the Regulatory Impact Review and Environmental Assessment.

4.9 Description of Significant Alternatives to the Proposed Action that Minimize Economic Impacts on Small Entities

An IRFA also requires a description of any significant alternatives to the proposed action(s) that accomplish the stated objectives, are consistent with applicable statutes, and that would minimize any significant economic impact of the proposed rule on small entities. Upon final action, this section will be updated to discuss the Council's preferred alternative (i.e., "proposed action") after final action by the Council.

5 Magnuson-Stevens Act and FMP Considerations

5.1 Magnuson-Stevens Act National Standards

Below are the 10 National Standards as contained in the Magnuson-Stevens Fishery and Conservation Act (Magnuson-Stevens Act), and a brief discussion of how each alternative is consistent with the National Standards, where applicable. In recommending a preferred alternative, the Council must consider how to balance the national standards.

National Standard 1 — Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery.

None of the alternatives considered in this action would affect overfishing of Pacific cod in the AI or BS. The alternatives, as designed currently, could affect the ability to achieve the optimum yield from the AI Pacific cod fishery. In those cases where the Adak shoreplant is not operating during February and March, there is the potential for a large portion of the AI Pacific cod set-aside to go unprocessed given the limited processing of the Atka shoreplant and the available options for removing the delivery restriction to AI shoreplants. Currently the action alternative does include an option for exemption from the regionalized delivery requirement prior to the beginning of the fishing year. There may be a need for an exemption from the regionalized delivery requirement given the following reasons: 1) there will likely only be two AI shoreplants in the immediate future; 2) the Adak shoreplant has an inconsistent processing history over the last decade, which could continue in the future; and 3) the Atka shoreplant is estimated to only be capable, *when completed*, of processing 5,000 mt of Pacific cod in a 28-day period. Only the Adak shoreplant has the potential to process a significant amount of AI Pacific cod at one million round pounds (454 mt) daily. If the Adak shoreplant is not operating, the Atka plant would not provide sufficient processing capacity for a set-aside greater than 6,000 mt in a four-week fishery; thereby leaving unharvested any remaining set-aside not processed by the Atka plant.

National Standard 2 — Conservation and management measures shall be based upon the best scientific information available.

The analysis for this amendment is based upon the most recent and best scientific information available.

National Standard 3 — To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.

The proposed action is consistent with the management of individual stocks as a unit or interrelated stocks as a unit or in close coordination.

National Standard 4 — Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, such allocation shall be (A) fair and equitable to all such fishermen, (B) reasonably calculated to promote conservation, and (C) carried out in such a manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.

In the previous AI Pacific cod sideboard action, NOAA GC had suggested the Council should, in particular, address several issues under National Standards 4 and 5 during the development of the rationale for the Council's action, should the action alternative be selected. Given the nature of this

action, these NOAA GC suggestions appear applicable to this action. The following two bullets highlight some of the issues suggested to be addressed under National Standard 4.

- How does the proposed action result in an allocation of fishing privileges that is fair and equitable?

  The proposed action does not change any sectors Pacific cod allocation. Every sector would continue to have access to their entire cod allocation. What changes under the proposed action is what vessels can harvest AI Pacific cod early in the new fishing year. Given that CVs in the past have been significant players in AI Pacific cod fishery, this action would continue that participation by those vessels in the fishery. For those displaced from the AI Pacific cod fishery under the proposed action, they could continue to harvest their Pacific cod allocation in the BS or in the AI after [Council selected option: March 1, March 7 or March 15]. In addition, many of the recent participants in the AI Pacific cod fishery are members of limited access programs that provide opportunities to consolidate harvest and processing privileges in other fisheries, thus allowing for increased participation in the AI Pacific cod fishery thus diminishing the historical share of these historical participants.

- How might the Council design the proposed action to avoid allowing any single processing entity to acquire an excessive share of processing privileges?

  National Standard 4 addresses excessive shares of fishing privileges, not processing privileges. NOAA guidance on NS 4 states that "only those measures that result in directed distributions of fishing privileges will be judged against the allocation requirements of Standard 4."

  Regardless, however, the proposed action does not limit the delivery of the AI Pacific cod set-aside to any one specific shoreplant, west of 170 degrees longitude, nor does it create a closed class of processors in the AI. Currently, there are two shoreplants in the AI management area that could process AI Pacific cod, but in the future there could be other shoreplants in the AI management area that could process Pacific cod. In addition, the proposed action includes several options to remove the delivery requirement if the fishery does not meet various performance standards. In addition, if the Council selects the option to exempt CVs from the delivery requirement prior to the AI Pacific cod fishing season if there is insufficient processing capacity in the AI management area, then AI Pacific cod could be delivered to offshore processors or processors outside the AI management area. There are also two options for consideration that would allow processing by entities other than AI shoreplants at the start of the A season (Options 1 and 5).

National Standard 5 — Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources, except that no such measure shall have economic allocation as its sole purpose.

The following bullets highlight some of the issues suggested by NOAA GC in the previous AI Pacific cod sideboard action to be addressed by the Council under National Standard 5.

- Does the proposed action promote efficient utilization of fishery resources?

  The proposed action would serve to limit the markets available to all CVs harvesting Pacific cod in the AI, during some or all of the Pacific cod A season, and, thus, reduce the operational flexibility and negotiating leverage of AI CVs, which could potentially lead to a lower price for their catch and reduce efficient utilization.

- What are the purposes of this action, aside from economic allocation?

  The BSAI FMP and the Programmatic Supplemental EIS (PSEIS) include management objectives related to potential societal benefits, such as 'providing socially and economically viable fisheries for the well-being of fishing communities' and 'balancing many competing uses of marine resources and different social and economic goals for sustainable fishery management, including protection of the long-term health of the resource and the optimization of yield.'

National Standard 6 — Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

The proposed alternative is not expected to affect the availability of and variability in the AI or BS Pacific cod fishery resource in future years. The harvest would be managed to and limited by the TAC, regardless of the proposed action considered in this amendment.

National Standard 7 — Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.

The proposed action does not duplicate any other management action.

National Standard 8 — Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.

The primary impetus for this action is to limit the amount of AI Pacific cod harvested by CVs that can be delivered to, and processed by, motherships/floaters/CPs in three specific BSAI rationalization programs, in order to protect shoreplant processing opportunities for AI Pacific cod, benefitting processing communities west of 170 degrees longitude. The shoreplant processor that has received the majority of AI Pacific cod harvested by CVs is located in Adak. While this action would not limit deliveries to shoreplant processors in any other community in the AI, the only other shoreplant processor located in the AI is in Atka. The Atka shoreplant was not directly engaged in the AI Pacific cod fishery during the 2003 through 2013 period. The shoreplant recently completed a $4 million expansion, and will begin another major round of improvements this year to make the plant a year-round facility. Once these improvements are completed, reportedly, sometime later in 2014 or 2015, the processing facility will have a processing capacity of 400,000 round pounds (181 mt) of Pacific cod per day.

Proponents of the action from Adak contend that the lack of restrictions on offshore processing preempts a significant opportunity for Pacific cod harvest in these areas to benefit CVs operating out of Adak and

delivering their catch to its shore-based processor. The transient markets provided by motherships and floating processors (and CPs acting as motherships) undermine community stability by operating only during the most profitable part of the season. Allowing the share of AI Pacific cod processed by motherships to potentially increase in future years (i.e., Alternative 1, no action) may make it difficult for shore-based processors to remain in business and provide the year-round markets necessary for smaller vessels engaged in a suite of different fisheries.

However, given the past financial difficulty of the Adak shoreplant, it is uncertain whether a shore-based plant will be operational in Adak in the near or long-term future, with or without the proposed action.

National Standard 9 — Conservation and management measures shall, to the extent practicable, (A) minimize bycatch, and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

The proposed amendment is not expected to have an effect on bycatch in the AI Pacific cod fishery.

National Standard 10 — Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.

The alternative proposed should have no significant effect on safety at seas.

5.2 Section 303(a)(9) Fisheries Impact Statement

Section 303(a)(9) of the Magnuson-Stevens Act requires that a fishery impact statement be prepared for each FMP amendment. A fishery impact statement is required to assess, specify, and analyze the likely effects, if any, including the cumulative conservation, economic, and social impacts, of the conservation and management measures on, and possible mitigation measures for (a) participants in the fisheries and fishing communities affected by the plan amendment; (b) participants in the fisheries conducted in adjacent areas under the authority of another Council; and (c) the safety of human life at sea, including whether and to what extent such measures may affect the safety of participants in the fishery.

The EA/RIR/IRFA prepared for this plan amendment constitutes the fishery impact statement. The likely effects of the proposed action are analyzed and described throughout the EA/RIR/IRFA. The effects on participants in the fisheries and fishing communities are analyzed in the RIR/IRFA sections of the analysis (Sections 2 and 4). Based on the information reported in this section, there is no need to update the Fishery Impact Statement included in the FMP.

The proposed action affects the groundfish fisheries in the EEZ off Alaska, which are under the jurisdiction of the North Pacific Fishery Management Council. Impacts on participants in fisheries conducted in adjacent areas under the jurisdiction of other Councils are not anticipated as a result of this action.

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