

---

---

## MEMORANDUM TO COUNCIL

---

---

To: Mayor and City Council Members  
From: Frank Kelty, Fisheries Consultant  
Through: Erin Reinders, City Manager  
Date: May 24, 2022  
Re: City Council Letter of Support to the North Pacific Fishery Management Council (NPFMC) at the June 2022 NPFMC Meeting in Support of C-2 BSAI Pacific Cod Small Boat Access Alternative 2 Option 1 and Sub Option B to be moved forward for Public Review and Final Action at the October 2022 NPFMC Meeting

---

---

**SUMMARY:** This has been an issue that Unalaska Native Fishermen's Association (UNFA) has been working on for four years, driven by declining Pacific Cod allocations and the tremendous increase in 58' < fixed gear fleet. These factors have decreased the length of seasons and reduced catch by the local Unalaska fleet, which is heavily dependent on the Pacific Cod fishery. UNFA is requesting continued support.

**PREVIOUS COUNCIL ACTION:** In May of 2021, Mayor Tutiakoff wrote a letter to the North Pacific Fishery Management Council in support of UNFA's request to have further analysis on the use of the 1.4% Jig allocation for the local small boat HAL, Pot CV and Jig. On October 9, 2020, the City Council discussed the issue and supported such a letter as well as related public testimony. On September 24, 2019 Council passed Resolution 2019-55 which supported the development of the Bering Sea Aleutian Island Pacific Cod Limited Access Privilege Program (LAPP) for the trawl catcher vessel sector, >60' pot catcher vessels. The resolution also included in the preamble support for the <60' fixed gear vessels for a community development quota based on the unused portion of the Pacific Cod Jig allocation.

**BACKGROUND:** UNFA has raised small boat concerns to the NPFMC for many years and has asked for assistance in addressing the impacts to the local small boat fleet based in Unalaska. The Unalaska City Council has been supportive, having written letters of support, and in the passage of Resolution 2019-55 Council supported an allocation based on the unused portion of the jig Pacific Cod allocation.

Previously UNFA considered requesting, at the December 2020 NPFMC meeting, support of an analysis to be included as part of the LAPP that has moving forward for the Trawl Catcher Vessel sector. This is important since the Magnuson-Stevens Conservation and Management Act (MSA) requires that entities such as Fishing Communities, Regional Fishing Associations and Community Fishing Associations be attached to a LAPP program and the only one underway in Alaska is the Trawl Catcher Vessel Pacific Cod LAPP request. This option was too difficult to get any traction on, and UNFA once again refocused on access to the 1.4% Jig allocation for use of the HAL, Pot CV and Jig under <55' LOA vessels.

**DISCUSSION:** Mayor Tutiakoff provided a letter to the NPFMC in May of 2021, in keeping with Council's support in October of 2020. The Unalaska City Council was supportive of UNFA's request in 2019 and provided Resolution 2019-55 and testimony at the October 2019 NPFMC meeting in Homer, Alaska. The situation for the local small boat cod fleet is an issue that the Unalaska City Council has been concerned with for years, with a local small boat facing continued

declines in the Pacific Cod allocation, and an over-capitalized fixed gear cod fleet. An updated letter of support has been prepared and is included in the packet.

**ALTERNATIVES:** The Council could support the request for a letter and testimony to NPFMC; amend the proposed letter; or choose to take no action.

**FINANCIAL IMPLICATIONS:** I believe supporting UNFA's request by letter or public testimony has no financial implications to the City of Unalaska.

**LEGAL:** N/A

**CONSULTANT RECOMMENDATION:** I recommend providing a letter of support and to provide public testimony, in support of moving C-2 BSAI Pacific Cod Small Boat Access Alternative 2 Option 1 and Sub Option B for public review and final action at the October 2022 NPFMC meeting.

**PROPOSED MOTION:** I make a motion to authorize the Mayor to sign the proposed letter of support, and to authorize the city's fisheries consultant to provide testimony to the North Pacific Fisheries Management Council meeting in June 2022 in Sitka, Alaska.

**ATTACHMENTS:**

1. [Proposed 2022 Letter from Mayor Tutiakoff to NPFMC](#)
2. [Draft 2022 C-2 NPFMC BSAI Pacific Cod Small Boat Access Analysis](#)
3. [Informational paper from Dustan Dickerson, Securing Unalaska Small Boat Future](#)
4. [May 26, 2021 Letter from Mayor Tutiakoff to NPFMC](#)
5. [Unalaska City Council support Resolution 2019-55 \(with attachments\)](#)

CITY OF UNALASKA  
43 Raven Way - P.O. Box 610  
Unalaska, Alaska 99685  
Tel (907) 581-1251 FAX (907) 581-1417



May 25, 2022

Simon Kinneen, Chairman  
North Pacific Fisheries Management Council  
1007 W 3rd Avenue, Suite 400  
Anchorage, AK 99501

**Re: C-2 BSAI Pacific Cod Small Boat Access**

Chairman Kinneen:

The City of Unalaska is writing in support of moving Alternative 2 Option 1: 55' LOA and Sub option B: the B season would remain a jig gear only fishery; for public review and final action at the October 2022 North Pacific Fishery Management Council (NPFMC) meeting in Anchorage, Alaska. We feel Alternative 2 Option 1 and sub option B which would develop a new fishing sector that would combine the less than 55' LOA or smaller, Hook and Line (HAL), Pot CV, and Jig sectors to fish the 1.4 percent jig allocation.

Mr. Chairman, as you are aware, the City of Unalaska and the Unalaska Native Fishermen's Association have provided written and verbal testimony of our concerns for years, concerning the ongoing race for fish within the overcapitalized < 60' fishing fleet. Combined with the continued decline in cod allocations and shorter fishing seasons, the economic viability of the cod fishery, of which the Unalaska's small boat is fleet heavily dependent upon, is threatened.

The analysis under Alternative 2 Option 1 appears to us to address the concerns of the small vessels that are facing increased competition in the <60' Pacific Pot Cod fishery. In 1994, the NPFMC supported a request from UNFA for a 1.4% Pacific cod jig allocation to be used by the region's local small-boat vessels to provide additional participation in the region's Pacific Cod fishery. It seems reasonable that the jig allocation could be developed under this new sector that could assist the smaller HAL, Pot CV, and would continue to provide a jig allocation as laid out in Sub option B of Alternative 2. I believe rollover provisions if needed from the A season, would be made to the <55' HAL, Pot CV for the C season which opens on September 1st.

Looking at trimester allocation within the jig allocation, I believe it could stay as is, with the HAL, Pot CV fishing the A and C season, and the Jig sector working the B season during the summer, which they traditionally do; and the jig sector harvesters could also participate in the A and C season if they so choose. Leaving the trimester season allocations would also assist with any sea lion concerns.

Simon Kinneen, Chairman  
NPFMC  
May 25, 2022

In closing, the City of Unalaska supports moving Alternative 2 Option 1 and Sub-option B for public review and final action at the October NPFMC meeting. This option is the only Alternative that addresses the City of Unalaska's concerns in a timely manner. The main objectives of the City of Unalaska are continuing to protect fishing opportunities for local vessels in BSAI Pacific Cod fisheries; continued support for fishing opportunities for community members; and to minimize the economic impact of an overcapitalized fishery facing a further reduction in fishing time and reduced Cod allocations.

We thank the North Pacific Fishery Management Council for considering the City of Unalaska's comments on C-2 BSAI Small Boat Access.

Sincerely,

CITY OF UNALASKA

---

Vincent M. Tutiakoff, Sr.  
Mayor

CC: City Manager Erin Reinders  
Unalaska City Council Members

## DRAFT FOR INITIAL REVIEW

### Regulatory Impact Review For a Proposed Amendment to the Fishery Management Plan for Groundfish of the Bering Sea / Aleutian Islands Management Area

#### Bering Sea Aleutian Island Pacific Cod Small Vessel Access

June 2022



For further information contact: Kate Haapala, North Pacific Fishery Management Council  
1007 W. 3<sup>rd</sup> Ave, Suite 400, Anchorage, AK 99501  
(907) 271-2809

**Abstract:** This Regulatory Impact Review analyzes a proposed amendment to allow smaller hook-and-line or pot catcher vessels operating in the Federal Bering Sea and Aleutian Island Pacific cod (*Gadus macrophalus*) less than 60' hook-and-line or pot catcher vessel sector to harvest Pacific cod from the jig sector's Federal Bering Sea Aleutian Island Pacific cod allocation. The proposed amendment considers redefining the current Federal BSAI Pacific cod jig sector to include jig catcher vessels and catcher processors as well as hook-and-line or pot vessels that are less than or equal to either 55' or 56' length overall. The proposed amendment could provide additional opportunities for current fishery participants and potential new entrants with smaller hook-and-line or pot catcher vessels without negatively impacting vessels currently operating in the Federal Bering Sea and Aleutian Island Pacific cod jig sector.

**Accessibility of this Document:** Effort has been made to make this document accessible to individuals with disabilities and compliant with Section 508 of the Rehabilitation Act. The complexity of this document may make access difficult for some. If you encounter information that you cannot access or use, please call us at [907-271-2809](tel:907-271-2809) so that we may assist you.

## List of Acronyms and Abbreviations

Acronym or Abbreviation	Meaning	Acronym or Abbreviation	Meaning
ABC	Acceptable Biological Catch	nm	Nautical miles
ADF&G	Alaska Department of Fish and Game	NMFS	National Marine Fishery Service
AFSC	Alaska Fisheries Science Center	NOAA	National Oceanic and Atmospheric Administration
AI	Aleutian Island	NOA	NOAA Administrative Order
AIS	Aleutian Island Subdistrict	Observer Program	North Pacific Groundfish and Halibut Observer Program
AKFIN	Alaska Fisheries Information Network	OMB	Office of Management and Budget
BS	Bering Sea	PSC	Prohibited species catch
BSAI	Bering Sea and Aleutian Islands	RFA	Regulatory Flexibility Act
CAS	Catch Accounting System	RIR	Regulatory Impact Review
CDQ	Community Development Quota Program	SAFE	Stock Assessment and Fishery Evaluation
CE	Categorical Exclusion	SBA	Small Business Act
CFEC	Commercial Fisheries Entry Commission	Secretary	Secretary of Commerce
COAR	Commercial Operator's Annual Report	TAC	Total allowable catch
Council	North Pacific Fishery Management Council	U.S.	United States
CP	Catcher/processor	USCG	United States Coast Guard
CV	Catcher vessel	USFWS	United States Fish and Wildlife Service
DHS	Dutch Harbor Subarea	VMS	Vessel monitoring system
E.O.	Executive Order		
EA	Environmental Assessment		
EEZ	Exclusive Economic Zone		
EFH	Essential Fish Habitat		
ES	Executive Summary		
FFP	Federal Fisheries Permit		
FMA	Fisheries Monitoring and Analysis		
FMP	Fishery Management Plan		
FR	<i>Federal Register</i>		
ft	Foot or feet		
GHL	Guideline harvest		
GOA	Gulf of Alaska		
H&L	Hook-and-line		
ICA	Incidental catch allowance		
ITAC	Initial total allowable catch		
IRFA	Initial Regulatory Flexibility Analysis		
lb(s)	Pound(s)		
LAPP	Limited Access Privilege Program		
LLP	License Limitation Program		
LOA	Length overall		
m	Meter or meters		
Mt	Metric ton(s)		
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act		
MMPA	Marine Mammal Protection Act		
NEPA	National Environmental Policy Act		

## Table of Contents

<i>Executive Summary</i> .....	7
1. Introduction .....	11
1.1. History of this Action .....	11
1.2. Purpose and Need .....	12
2. Description of the Alternatives .....	12
2.1. Alternative 1, No Action .....	13
2.2. Alternative 2, Redefine the Current BSAI Pacific Cod Jig Sector .....	13
2.2.1. Suboption, B-season as jig fishery only .....	14
3. Description of Fisheries .....	14
3.1. Statutory Authority .....	15
3.2. BSAI Pacific Cod Fishery Management .....	15
3.3. Reallocations Among BSAI Pacific Cod Sectors .....	20
3.4. License Limitation Program .....	21
3.5. State Management Measures .....	21
3.6. Impacted Sectors .....	25
3.6.1. BSAI Pacific Cod Less Than 60' H&L or Pot CV Sector .....	25
3.6.2. BSAI Pacific Cod Jig Sector .....	31
3.7. Product Composition and Flow of Pacific Cod .....	33
4. Analysis of Impacts .....	34
4.1. Methods and Approach for Impact Analysis .....	34
4.2. Alternative 1, Status Quo .....	36
4.3. Alternative 2, Redefine the Current BSAI Pacific Jig Sector .....	37
4.3.1. Historical Participation .....	37
4.3.2. Harvest Information .....	40
4.3.3. Reallocation Considerations .....	41
4.3.4. Diversification and Revenue Information .....	44
4.3.5. Additional Fishing Opportunities for H&L or pot CVs .....	52
4.3.6. Suboption – B Season as Jig Only Fishery .....	52
4.4. Summary of Impacts on Fishing Activity .....	54
4.5. Community Impacts .....	54
4.5.1. H&L or pot CVs Greater Than 56' LOA .....	54
4.5.2. H&L or Pot CVs Less Than or Equal to 56' LOA .....	59
4.5.3. Jig Vessels .....	63
4.5.4. Impacts to Processors .....	66
5. Management and Enforcement Considerations .....	68
6. Affected Small Entities (Regulatory Flexibility Act Considerations) .....	71
7. Summation of the Alternatives with Respect to Net Benefit to the Nation .....	72
8. Magnuson-Stevens Act and FMP Considerations .....	73
8.1. Magnuson-Stevens Act National Standards .....	73
8.2. Section 303(a)(9) Fisheries Impact Statement .....	74
8.3. Council's Ecosystem Vision Statement .....	75
9. Preparers and Persons Consulted .....	76
10. References .....	77

## List of Tables

Table 3-1	BSAI Pacific cod ABC, TAC, and ITAC from 2003 through 2013 and BS and AI Pacific cod ABC, TAC, and ITAC from 2014 through 2022 (amounts in mt) .....	17
Table 3-2	Percent of non-CDQ BSAI Pacific cod sector allocations by BSAI groundfish FMP amendment .....	18
Table 3-3	2022 BSAI Pacific cod non-CDQ sector allocations and seasonal allowances.....	19
Table 3-4	Aleutian Islands State-waters Pacific cod fishery guideline harvest level and harvest from 2006 through 2021 .....	23
Table 3-5	Summary of Dutch Harbor Subarea State-waters Pacific cod guideline harvest fishery regulations .....	24
Table 3-6	Pacific cod harvest (lbs.) with pot gear in the State of Alaska DHS GHF Pacific cod fishery from 2014 through 2021.....	25
Table 3-7	Dutch Harbor Subdistrict State-waters Pacific cod jig fishery harvest, effort, value, and season dates, 2019 through 2021.....	25
Table 3-8	Count of vessels in the BSAI Pacific cod less than 60' H&L or pot CV sector, the sector's initial allocation (mt), reallocation amounts from other sectors (mt), and final allocation (mt) from 2008 through 2021 .....	28
Table 3-9	Less than 60' H&L or pot CV sector BSAI Pacific cod ex-vessel price (\$), BSAI Pacific cod gross ex-vessel revenue (millions \$), BSAI Pacific cod gross first wholesale value (millions \$) from 2008 through 2020 .....	28
Table 3-10	Total number of less than 60' H&L or pot CV delivery ports and total number of deliveries of targeted BSAI Pacific cod from 2008 through 2020.....	29
Table 3-11	Halibut, crab, and salmon prohibited species catch by the less than 60' H&L or pot CV sector while targeting Federal BSAI Pacific cod from 2008 through 2021 .....	29
Table 3-12	Vessels <60' LOA targeting Federal BSAI Pacific cod with H&L or pot gear by community of vessel historic ownership address, 2008 - 2020 .....	30
Table 3-13	Count of vessels in the BSAI Pacific cod jig sector, initial allocation (mt), final allocation (mt), and reallocation amounts (mt) to other BSAI Pacific cod sectors from 2008 through 2021 .....	32
Table 3-14	BSAI Pacific cod jig sector ex-vessel price (\$), BSAI Pacific cod gross ex-vessel revenue (millions \$), BSAI Pacific cod gross first wholesale value (millions \$) from 2008 through 2020.....	32
Table 4-1	Count of vessels that would have been eligible for the new BSAI Pacific cod small vessel sector and the redefined less than 60' H&L or pot CV sector under option 1 and option 2 from 2008 through 2021 .....	39
Table 4-2	Comparison of BSAI Pacific cod less than 60' H&L or pot CV sector final allocation (mt), the target landings (mt) of BSAI Pacific cod by H&L or pot CVs less than or equal to 56' LOA, and the jig sector's reallocation amount (mt) from 2008 through 2021.....	43
Table 4-3	Vessel count, gross ex-vessel revenue (\$), and percent of gross ex-vessel revenue (\$) by fishery from 2008 through 2020 for H&L or pot CVs greater than 56' LOA .....	48
Table 4-4	Estimated range of potential gross ex-vessel revenue impacts for H&L or pot CVs greater than 56' LOA under Alternative 2 from 2008 through 2020, (real 2020 \$).....	49
Table 4-5	Estimated maximum potential revenue opportunity for H&L or pot CVs less than or equal to 56' LOA under Alternative 2 from 2008 through 2020, (real 2020 \$).....	50
Table 4-6	Federal BSAI Pacific cod less than 60' H&L or pot CV sector and DHS Pacific cod pot fishery season dates from 2014 through 2021 .....	51
Table 4-7	Count of BSAI Pacific cod deliveries, the average number of deliveries, and the percent of total deliveries made by vessels operating in the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors in each jig sector trimester from 2008 through 2021 .....	53
Table 4-8	Summary of impacts on fishing activity.....	54
Table 4-9	Vessels greater than 56' LOA targeting Federal BSAI Pacific cod with H&L or pot gear by community of vessel historic ownership address from 2008 through 2020 (number of vessels) .....	56
Table 4-10	Gross ex-vessel revenues for H&L or pot CVs greater than 56' LOA targeting Federal BSAI Pacific cod by community of vessel historic ownership address, 2008 through 2020 (thousands of real 2020 dollars).....	57
Table 4-11	Gross ex-vessel revenue diversification for H&L or pot CVs greater than 56' LOA targeting Federal BSAI Pacific cod by community of vessel historic ownership address, 2008 through 2020 (millions of real 2020 dollars).....	57
Table 4-12	Revenue diversification for communities with vessels greater than 56' LOA targeting Federal BSAI Pacific cod by gross ex-vessel revenue, 2008 through 2020 (millions of 2020 real dollars).....	58



Attachment 2, page 5 of 77

Table 4-13	Vessels less than or equal to 56' LOA targeting Federal BSAI Pacific cod with H&L or pot gear by community of vessel historic ownership address from 2008 through 2020 (number of vessels) .....	60
Table 4-14	Gross ex-vessel revenues for H&L or pot CVs less than or equal to 56' LOA targeting Federal BSAI Pacific cod by community of vessel historic ownership address, 2008 through 2020 (thousands of real 2020 dollars).....	61
Table 4-15	Gross ex-vessel revenue diversification for H&L or pot CVs less than or equal to 56' LOA targeting Federal BSAI Pacific cod by community of vessel historic ownership address, 2008 through 2020 (millions of real 2020 dollars).....	61
Table 4-16	Revenue diversification for communities with vessels less than or equal to 56' LOA targeting Federal BSAI Pacific cod by gross ex-vessel revenue, 2008 through 2020 (millions of 2020 real dollars).....	62
Table 4-17	Vessels targeting Federal BSAI Pacific cod with jig gear by community of vessel historic ownership address, 2008 through 2020 .....	64
Table 4-18	Gross ex-vessel revenue diversification for jig vessels targeting Federal BSAI Pacific cod by community of vessel historic ownership address, 2008 through 2020 (millions of real dollars) .....	65
Table 4-19	Revenue diversification for communities with vessels targeting Federal BSAI Pacific cod with jig gear by gross ex-vessel revenue, 2008 through 2020 (millions of dollars, 2020 real dollars).....	65
Table 4-20	Revenue diversification for processors receiving Federal BSAI Pacific cod from H&L or pot CVs greater than 56' LOA, 2008 through 2020 (millions of 2020 real dollars).....	67
Table 4-21	Revenue diversification for processors receiving Federal BSAI Pacific cod from H&L or pot CVs less than or equal to 56' LOA, 2008 through 2020 (millions of 2020 real dollars).....	67
Table 5-1	Comparison of definitions of vessel length and ways to measure vessels across management jurisdictions .....	71

## List of Figures

Figure 2-1	Comparison of changes to the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors under Alternative 1 and Alternative 2.....	14
Figure 3-1	Map of NMFS BSAI sub-areas for management.....	16
Figure 4-1	BSAI Pacific cod landings (mt) for H&L and pot CVs greater than 56' LOA compared to the less than 60' H&L or pot CV sector's final allocation from 2008 through 2021.....	37
Figure 4-2	Comparison of BSAI Pacific cod jig sector initial allocation (mt) and the target landings (mt) of jig, H&L, and pot vessels that would be eligible for the new BSAI Pacific cod small vessel sector under option 1 and 2 from 2008 through 2021.....	40
Figure 4-3	Comparison of the BSAI Pacific cod jig sector's total reallocaiton amount (mt) to all BSAI Pacific cod sectors and the reallocation amount (mt) to the less than 60' H&L or pot CV sector from 2008 through 2021.....	43

## Executive Summary

This Regulatory Impact Review (RIR) analyzes a proposed amendment to allow smaller hook-and-line (H&L) or pot catcher vessels (CVs) operating in the Federal Bering Sea (BS) Aleutian Island (AI) Pacific cod (*Gadus macrocephalus*) less than 60' H&L or pot CV sector to harvest Pacific cod from the jig sector's Federal BSAI Pacific cod allocation. The proposed amendment considers redefining the current Federal BSAI Pacific cod jig sector to include jig CVs and catcher processors (CPs) as well as H&L or pot CVs that are less than or equal to either 55' or 56' length overall (LOA). The proposed amendment could provide additional opportunities for current fishery participants and potential new entrants with smaller H&L or pot CVs without negatively impacting vessels currently operating in the Federal BSAI Pacific cod jig sector.

The RIR is structured to streamline the information required for an RIR and to organize it to be most easily understood by the reader. **Chapters 1 and 2** contain a description of the purpose and need for the action, followed by a description of the history of the action and the alternatives. **Chapter 3** contains the description of the fisheries including information on BSAI Pacific cod management at both the Federal and State levels as well as a description of the impacted sectors. **Chapter 4** contains the impact analysis on the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors and a summary of potential community and processor impacts. **Chapter 5** includes an assessment of impacts related to monitoring and enforcement.

### Purpose and Need

The North Pacific Fishery Management Council (Council) is considering this action because the less than 60' H&L or pot CV sector has seen an increase in participation in recent years, and the capacity and efficiencies (e.g., a vessel's power and width) of larger H&L or pot CVs within the sector could potentially constrain smaller vessels' harvest of BSAI Pacific cod, despite having historically contributed to the catch history that established the Amendment 85 BSAI Pacific cod sector's allocations<sup>1</sup>. The purpose of this action is to provide additional opportunities for smaller H&L and pot CVs by redefining the current BSAI Pacific cod jig sector to include these vessels.

The Council adopted the following Purpose and Need statement on June 15, 2021.

*Increased participation in the <60 ft hook-and-line and pot catcher vessel Pacific cod sector by higher-capacity vessels over 57 ft LOA has negatively impacted smaller vessels in the sector through shortened seasons. These shortened seasons limit smaller vessels' ability to compete within the sector as they are limited to fish in less productive waters near port due to their size. The jig sector allocation has not historically been fully utilized, particularly in the A and C seasons. Allowing these smaller catcher vessels using hook-and-line and pot gear to harvest Pacific cod from the jig sector allocation may provide additional opportunities for current fishery participants and potential new entrants with smaller catcher vessels without negatively impacting catcher vessels using jig gear.*

The scope of this action is limited to the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors, and it would not redefine any other Amendment 85 sector or their allocation. This action would require an amendment to the BSAI Groundfish fishery management plan (FMP). An Amendment is necessary to change the allocations for each sector, redefine the existing sectors, and/or create a new sector because the BSAI Pacific cod allocations were assigned as an amendment to the BSAI Groundfish FMP.

---

<sup>1</sup> Amendment 85 to the BSAI Groundfish Fishery Management Plan modified the BSAI non-CDQ Pacific cod TAC allocation and defined specific harvesting sectors.

## Alternatives

The Council adopted the following alternatives for analysis in June 2021.

**Alternative 1:** Status quo

**Alternative 2:** Redefine the current BSAI Pacific cod jig sector to include H&L/pot CVs less than or equal to:

Option 1: 55' LOA

Option 2: 56' LOA

Suboption: B-season fishery would remain jig gear only fishery.

## Comparison of Alternatives and Impacts

Under Alternative 1, status quo, the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors, their allocation, and the hierarchy of reallocations of BSAI Pacific cod among all sectors currently set in Federal regulations at §679.20(a)(7)(iii) would remain unchanged. The less than 60' H&L or pot CV sector includes all CVs that are less than 60' LOA using H&L or pot gear. The BSAI Pacific cod jig sector includes all vessels (CVs and catcher processors (CPs)) using jig gear.

Alternative 2 would affect vessels fishing in Federal waters with a Federal Fisheries Permit (FFP) and a Limited License Permit (LLP) in the current BSAI Pacific cod less than 60' H&L or pot sector as well as the jig sector. Under Alternative 2, the BSAI Pacific cod jig sector would be redefined as the new BSAI Pacific cod small vessel sector which would include jig CVs and CPs as well as H&L or pot CVs less than or equal to either 55' or 56' LOA (option 1 and 2, respectively). The BSAI Pacific cod less than 60' H&L or pot CV sector would be redefined to exclude H&L or pot CVs less than or equal to either 55' or 56' LOA.

Alternative 2 would allow all vessels using H&L, pot, and jig gear in the new BSAI Pacific cod small vessel sector to harvest BSAI Pacific cod from the jig sector's 1.4 percent allocation. H&L or pot CVs in the redefined less than 60' sector would harvest BSAI Pacific cod from the less than 60' H&L or pot CV sector's 2 percent allocation. Eligibility for either sector – the new BSAI Pacific cod small vessel sector and the redefined less than 60' H&L or pot CV sector – would be based on a vessel's length and gear type. This means a H&L or pot vessel could not opt into one sector or the other.

The BSAI Pacific cod jig sector's 1.4 percent allocation of Federal BSAI Pacific cod is apportioned on a trimester basis (Jan 1—Apr 30; Apr 30 –Aug 31; Aug 31—Dec 31). The suboption proposes an option for analysis where jig CVs and CPs are the only gear-type allowed to fish during the B season (Apr 30 – Aug 31). The Council's rationale for including this suboption is that jig vessels have historically made the majority of their BSAI Pacific cod deliveries between April and September when the weather is safest for smaller vessels to operate.

### *Allocation and reallocation impacts*

The less than 60' H&L or pot CV sector receives their entire allocation of BSAI Pacific cod TAC on January 1, and the sector typically receives a reallocation from the jig sector during the jig sector's A season (between January and March) which extends their season to harvest BSAI Pacific cod. Under Alternative 2, option 1 and 2, it is anticipated that H&L or pot CVs in the new BSAI Pacific cod small vessel sector would have an opportunity to harvest more Pacific cod in the A season, and these small vessels could fully utilize the BSAI Pacific cod jig sector's A season allowance. It is also possible that the new BSAI Pacific cod small vessel sector would not fully utilize the jig sector's A season allowance, but

these smaller H&L or pot CVs could fish at a slower pace and extend their fishing early in the year absent competition from larger H&L or pot CVs in the redefined less than 60' H&L or pot CV sector. It would be uncertain if or when NMFS would be able to project whether any TAC would be available from the new BSAI Pacific cod small vessel sector to reallocate to the redefined less than 60' H&L or pot CV sector. Therefore, **Alternative 2 (option 1 and option 2) could impact the historically common, if annually variable, reallocations of BSAI Pacific cod from the jig sector to the less than 60' H&L or pot CV sector which would be redefined to exclude H&L or pot CVs less than either 55' or 56' LOA.**

#### *Fishing effort impacts*

It is anticipated that Alternative 2 (option 1 or option 2) could impact the availability of historically common reallocations of BSAI Pacific cod from the jig sector (redefined as the new BSAI Pacific cod small vessel sector) to the less than 60' H&L or pot CV sector (redefined to exclude H&L or pot CVs less than either 55' or 56' LOA). While there would be fewer vessels participating in the redefined less than 60' H&L or pot CV sector because smaller H&L or pot CVs either 55' or 56' LOA would be excluded, historically, the relative contribution of the jig sector's reallocation (mt) to the less than 60' H&L or pot CV sector's final allocation has been greater than the landings (mt) of the smaller H&L or pot CVs that would be eligible for the new BSAI Pacific cod small vessel sector. Changes in the projected amount of BSAI Pacific cod TAC that would be available for the redefined less than 60' H&L or pot CV sector could impact fishing effort. Specifically, **H&L or pot CVs in the redefined less than 60' H&L or pot CV sector could fish at a faster pace as there would be less BSAI Pacific cod TAC available early in the year when these vessels target BSAI Pacific cod in the Federal fishery.** This could have cumulative effects on these vessel's safety, and it is more challenging for NMFS to conservatively manage a fishery with smaller quotas and fished at a faster pace.

#### *Dutch Harbor Subarea State waters fishery impacts*

The State of Alaska manages three guideline harvest limit (GHL) fisheries for Pacific cod within State waters (0 to 3 nautical miles (nm)) in the BSAI: the AI Subdistrict fishery and two that occur in a subarea of the BS – the Dutch Harbor Subdistrict (DHS) pot fishery and the DHS jig fishery. The DHS pot fishery opens seven days after the Federal BSAI Pacific cod less than 60' H&L or pot CV sector closes, and it is open to vessels less than or equal to 58' LOA using pot gear with a limit of 60 pots per vessel. Under Alternative 2 (option 1 and option 2), the Alaska Board of Fisheries (BOF), with industry input, would need to address the trigger for opening the DHS pot fishery because the less than 60' H&L or pot CV sector would be redefined and no longer exist as it currently does in regulations. The BOF would also need to determine what the new trigger should be – the new BSAI Pacific cod small vessel sector closing date, the redefined less than 60' H&L or pot CV sector closing date, or some other trigger such as a hard start date.

It is uncertain what action the BOF would take to open the DHS pot fishery. However, if the BOF chose to select one of the newly defined sectors' closure date as the trigger, vessels that operate in that trigger sector would be able to choose to fish in the Federal BSAI Pacific cod fishery until it closed and then register to fish in the DHS pot fishery once it opened. However, **vessels that do not operate in the sector that would trigger the DHS opening would likely need to decide whether they want to participate in Federal or State waters if both were open at the same time.** Alternative 2 would not impact the timing of the DHS jig fishery because the fishery opens with a hard date of May 1.

#### *Economic impacts*

As stated above, it is anticipated that Alternative 2 would impact the historically common reallocations of BSAI Pacific cod from the jig sector (redefined as the new BSAI Pacific cod small vessel sector) to the

less than 60' H&L or pot CV sector (redefined to exclude H&L or pot CVs less than either 55' or 56' LOA). Annual reallocation amounts of BSAI Pacific cod from the jig sector to the less than 60' H&L or pot CV sector have ranged from 1,500 mt to 3,200 mt, accounting for an average of 30 percent of the less than 60' H&L or pot CV sector's final allocation since 2008. Under Alternative 2, **the estimated annual average gross ex-vessel revenue impact for H&L or pot CVs greater than 56' LOA is a \$1.26 million decrease in potential revenue (2008-2020). The estimated annual average gross ex-vessel revenue opportunity for H&L or pot CVs less than or equal to 56' is \$1.08 million (2008-2020)** (see Section 4.3.4).<sup>2</sup>

Under current State regulations, each year the DHS pot fishery is set at 8 percent of the BS acceptable biological catch (ABC) with an annual 1 percent increase if 90 percent of the GHL is harvested until the GHL reaches 15 percent of the BS ABC. The 15 percent GHL will continue unless changed by the BOF. The 2022 DHS pot fishery was set at 11 percent of the BS ABC and has the potential to increase another 4 percent. The DHS pot fishery is a significant opportunity for pot vessels less than or equal to 58' LOA. Under Alternative 2 (option 1 and option 2), some portion of pot vessels could need to choose to participate in either the Federal or GHL fishery depending on whether their sector closed prior to the DHS pot fishery opening. While the revenue impacts of potentially changing the DHS pot fishery opening are uncertain, the annual average gross ex-vessel revenue pot CVs greater than 56' earn from the DHS pot fishery is \$6.67 million, accounting for 24 percent of these vessel's total gross ex-vessel revenue across all fisheries (2014-2020). The annual average gross ex-vessel revenue pot CVs less than or equal to 56' earn from the GHL fishery is \$1.21 million, accounting for 20 percent of their total gross ex-vessel revenue across all fisheries (2014-2020).

#### *Suboption impacts*

The Council has included a suboption under Alternative 2 that would reserve the jig sector's B season allowance (Apr 30 – Aug 31) for harvest by jig CVs and CPs only in the new BSAI Pacific cod small vessel sector. Jig vessels participating in the Federal BSAI Pacific cod fishery make the majority of their deliveries between April and September when the weather is safest for these vessels to operate, whereas the majority of Federal BSAI Pacific cod deliveries from the less than 60' H&L or pot CVs are concentrated in January and the fall which is also when the fishery has been open. **If H&L or pot CVs eligible for the new BSAI Pacific cod small vessel sector were allowed to harvest BSAI Pacific cod during the jig sector's B season, it is possible these vessels could constrain jig vessels during the B season when they have historically prosecuted the fishery.** Because the less than 60' H&L or pot CV sector has historically closed by the time the jig sector's B season begins on April 30 and does not reopen until September 1 after the jig sector's B season is closed, **the suboption would not negatively impact H&L or pot CVs eligible for the new BSAI Pacific cod small vessel sector.**

#### *Community impacts*

The majority of vessels that have historically participated in the less than 60' H&L or pot CV and jig sectors have a registered ownership address in an Alaska community. However, within the less than 60' H&L or pot CV sector, there is variation in the reported owner address among the different vessel LOA categories. Kodiak has the largest number of reported vessel owners for H&L or pot CVs greater than 56' LOA whereas Dutch Harbor/Unalaska has the largest number of reported owners for smaller H&L or pot CVs. **Therefore, under Alternative 2, there could be a distributional impact at the community-level.**

---

<sup>2</sup> Due to data confidentiality restrictions, the analysis aggregates revenue data for H&L or pot CVs less than or equal to 56' LOA.

## *Environmental impacts*

There are **no anticipated impacts on the human environment under Alternative 2**, because the action is unlikely to substantially change fishing location, timing, effort, authorized gear types, and harvest levels. These findings lead to a preliminary determination by the National Marine Fisheries Service (NMFS) to seek a Categorical Exclusion (CE) under National Oceanic and Atmospheric Administration (NOAA) Administrative Order (NOA) 216-6 (see Section 4.4 for a summary of impacts on fishing activity).

# 1. Introduction

This RIR analyzes a proposed amendment to the BSAI Groundfish FMP to allow smaller H&L or pot CVs operating in the Federal BSAI Pacific cod (*Gadus macrocephalus*) less than 60' H&L or pot CV sector to harvest Pacific cod from the jig sector's Federal BSAI Pacific cod allocation. The proposed amendment considers redefining the current Federal BSAI Pacific cod jig sector to include jig CVs and CPs as well as H&L or pot CVs that are less than or equal to either 55' or 56' LOA. The proposed amendment could provide additional opportunities for current fishery participants and potential new entrants with smaller H&L or pot CVs without negatively impacting vessels currently operating in the Federal BSAI Pacific cod jig sector.

The RIR provides an assessment of the impacts of a proposed action and its reasonable alternatives, as well as the benefits and costs of the alternatives, the distribution of impacts, and identification of the small entities that may be affected by the alternatives. This RIR addresses the statutory requirements of the Magnuson Stevens Fishery Conservation and Management Act (MSA), the National Environmental Policy Act (NEPA), Presidential Executive Order 12866, and some of the requirements of the Regulatory Flexibility Act (RFA). An RIR is a standard document produced by the Council and the NMFS Alaska Region to provide the analytical background for decision-making.

Alaska Region Office has made the preliminary determination that the proposed action does not result in substantial modifications of fishing location, timing, effort, authorized gear types, or harvest levels relative to the status quo and relative to what was analyzed in previous approved actions. Any pursuant regulatory changes would have no effect, individually or cumulatively on the human environment as defined in NAO 216-6. As such, NMFS foresees that this action would qualify for a Categorical Exclusion from further review under NEPA. For that reason, this document does not include an Environmental Assessment (EA)<sup>3</sup>.

## 1.1. History of this Action

At the October 2019 Council meeting, the Council tasked staff with a discussion paper in response to the concerns expressed by some stakeholders in the less than 60' H&L or pot CV sector that described some challenges smaller H&L or pot CVs face, including increased participation within the less than 60' H&L or pot CV sector and inter-sector competition from a subgroup of vessels typically 58' LOA with increased capacity and efficiencies.

*“In addition to increased participation, the rise of ‘Super 8s’ within the <60 vessel class contributes to growing disparities and unfair competition within the <60 vessel class*

<sup>3</sup> The analysts have consulted with NMFS Alaska Region and preliminarily determined that none of the alternatives have the potential to have an effect individually or cumulatively on the human environment. This determination is subject to further review and public comment. If this determination is confirmed when a proposed rule is prepared, the proposed action will be categorically excluded from the need to prepare an EA.

<sup>4</sup> The Council does not have a formal definition for a ‘Super 8’ vessel, but the term indicates the vessel is at or below 58' LOA and has dimensions or attributes that are supersized relative to its length (CFEC 2015).<sup>4</sup> Typically the bigger

*size. These disparities are rooted in non-traditional efficiency improvements within the Super 8 fleet (e.g., power, capacity, vessel width, etc.), and have detrimental effects on long-term participants and communities dependent on fixed gear Pacific cod fisheries.”<sup>5</sup>*

In October 2019, the Council tasked staff with evaluating “the potential impact of expanding the allowable participants to fish off of the jig sector allocation to small, fixed gear catcher vessels (e.g., <57’, trip limits up to 15,000 lbs., pot limits less than 25 pots)” to address the access challenges smaller vessels face while operating in the less than 60’ H&L or pot CV sector.

At the June 2021 Council meeting, the Council received a presentation on the discussion paper tasked in October 2019. That paper and presentation provided the Council an opportunity to discuss and give direction on its preference for potential future work related to small vessel access opportunities in the BSAI Pacific cod less than 60’ H&L or pot CV sector. To address the unintended inter-sector competition, which may be potentially constraining smaller CV’s ability to harvest BSAI Pacific cod by the larger vessels with increased efficiencies, the Council adopted a purpose and need statement and a set of alternatives for this issue in June 2021.

## 1.2. Purpose and Need

The Council is considering this action because the less than 60’ H&L or pot CV sector has seen an increase in participation in recent years, and the sector has become unintentionally marked by two vessel size categories—CVs typically 58’ LOA that have additional efficiencies (e.g., width and power) and smaller H&L or pot CVs typically less than or equal to 56’ LOA. The purpose of this action is to provide additional opportunities for smaller H&L and pot vessels by redefining the current BSAI Pacific cod jig sector to include these H&L or pot CVs without negatively impacting jig fishery participants. The BSAI Pacific cod jig sector has historically underutilized its 1.4 percent allocation of BSAI Pacific cod under Amendment 85, the majority of which has historically been reallocated to the less than 60’ H&L or pot CV sector (see Table 3-8).

Council adopted the following Purpose and Need statement on June 15, 2021.

*Increased participation in the <60 ft hook-and-line and pot catcher vessel Pacific cod sector by higher-capacity vessels over 57 ft LOA has negatively impacted smaller vessels in the sector through shortened seasons. These shortened seasons limit smaller vessels’ ability to compete within the sector as they are limited to fish in less productive waters near port due to their size. The jig sector allocation has not historically been fully utilized, particularly in the A and C seasons. Allowing these smaller catcher vessels using hook-and-line and pot gear to harvest Pacific cod from the jig sector allocation may provide additional opportunities for current fishery participants and potential new entrants with smaller catcher vessels without negatively impacting catcher vessels using jig gear.*

The scope of this action is limited to the BSAI Pacific cod less than 60’ H&L or pot CV and jig sectors. Alternative 2 would require an amendment to the BSAI Groundfish FMP. An Amendment is necessary to change the allocations for each sector, redefine the existing sectors, and/or create a new sector because the BSAI Pacific cod allocations were assigned as an amendment to the BSAI Groundfish FMP. This amendment would not redefine any other Amendment 85 sector or their allocations.

## 2. Description of the Alternatives

---

attributes benefit the fishing effectiveness of a Super 8 vessel, such as more expansive deck space that allows for more fishing pots and other gear onboard.

<sup>5</sup> Unalaska Native Fishermen’s Association. October 2019. Public Comment Letter.



The Council adopted the following alternatives for analysis in June 2021.

**Alternative 1:** Status quo

**Alternative 2:** Redefine the current BSAI Pacific cod jig sector to include H&L/pot CVs less than or equal to:

Option 1: 55' LOA

Option 2: 56' LOA

Suboption: B-season fishery would remain jig gear only fishery.

## 2.1. Alternative 1, No Action

Amendment 85 to the BSAI Groundfish FMP modified the non-Community Development Quota (CDQ) Pacific cod allocations among nine defined sectors. Under Alternative 1, no action, every BSAI Pacific cod sector, their allocation, and the hierarchy of reallocations of BSAI Pacific cod among sectors set in Federal regulations at *50 CFR part 679* would remain unchanged. Therefore, under Alternative 1, the current BSAI Pacific cod less than 60' H&L or pot CV and jig sectors would remain as is.

## 2.2. Alternative 2, Redefine the Current BSAI Pacific Cod Jig Sector

Alternative 2 would affect vessels fishing in Federal waters with a Federal Fisheries Permit (FFP) and a Limited License Permit (LLP) in the current BSAI Pacific cod less than 60' H&L or pot and jig sectors. Based on the June 2021 discussion paper exploring this action, and public comment received at the October 2019 and June 2021 Council meetings, the Council's motion considers two different options for a vessel LOA limit to define eligibility for a new BSAI Pacific cod small vessel sector.<sup>6</sup> Under Alternative 2, the BSAI Pacific cod jig sector would be redefined as the new BSAI Pacific cod small vessel sector which would include jig CVs and CPs as well as H&L or pot CVs that are less than or equal to:

Option 1: 55' LOA

Option 2: 56' LOA

The current less than 60' H&L or pot CV sector would be redefined to exclude H&L or pot CVs less than either 55' or 56' LOA. Figure 2-1 below compares the proposed changes to each sector and the allocation under Alternative 2, option 1 and option 2.

The BSAI Pacific cod jig sector has three seasonal allowances: Jan 1—Apr 30 (60%); Apr 30—Aug 31 (20%), and Aug 31—Dec 31 (20%), whereas the less than 60' H&L or pot CV sector was excluded from the limitation of seasonal allocations under Amendment 85 and instead receives their entire allocation of BSAI Pacific cod on January 1. The Council's rationale for this action at the June 2021 meeting clarified the Council's intent that the new BSAI Pacific cod small vessel sector would harvest BSAI Pacific cod from the jig sector's 1.4 percent allocation, and that it would continue to be apportioned on a trimester basis. All CVs remaining in the redefined less than 60' H&L or pot CV would continue to access the sector's 2 percent allocation of BSAI Pacific cod.

---

<sup>6</sup> Vessel owners must report the LOA to NMFS on their FFP and to the Alaska Commercial Fisheries Entry Commission (CFEC).

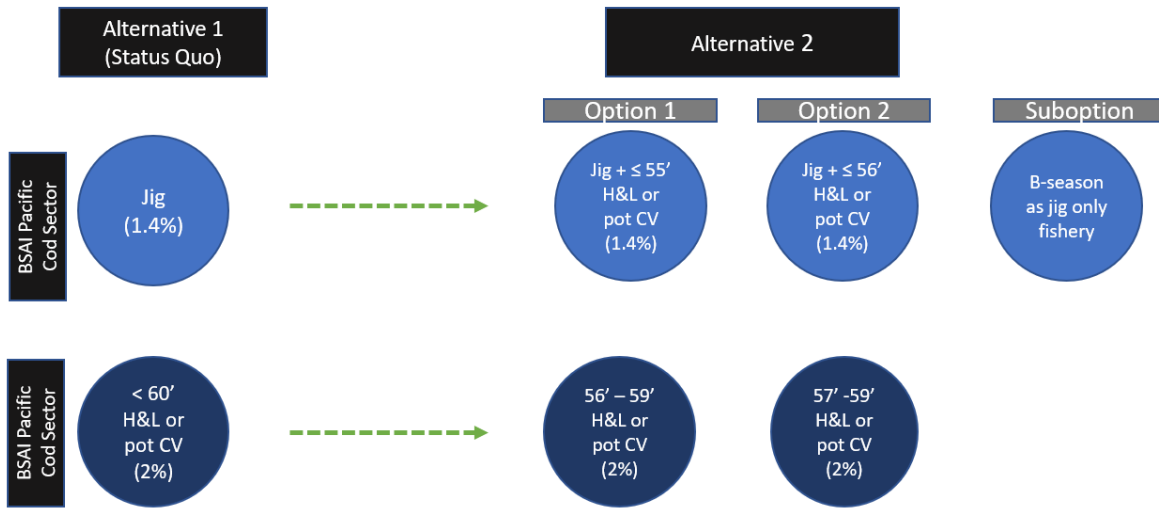


Figure 2-1 Comparison of changes to the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors under Alternative 1 and Alternative 2

### 2.2.1. Suboption, B-season as jig fishery only

The suboption proposes an option for analysis where jig CVs and CPs would be the only gear-type allowed to fish during the B season (Apr 30 – Aug 31). The Council’s rationale for including this suboption is that jig vessels make the majority of their BSAI Pacific cod deliveries between April and September when the weather is safest for smaller vessels to operate. H&L and pot CVs typically prosecute other fisheries during the jig sector’s B season and their BSAI Pacific cod sector has not been open during the spring/summer months in recent years.

## 3. Description of Fisheries

This RIR examines the economic costs and benefits of a proposed regulatory amendment that would allow H&L or pot CVs less than or equal to either 55’ or 56’ LOA currently operating in the Federal BSAI Pacific cod less than 60’ H&L or pot CV sector to harvest Pacific cod from the jig sector’s Federal allocation of BSAI Pacific cod. The purpose of this action is to provide additional opportunities for current fishery participants and potential new entrants with smaller H&L or pot vessels without negatively impacting vessels using jig gear.

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 nevertheless 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, the environment, public health or safety, or State, 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 E.O. 12866.

### **3.1. Statutory Authority**

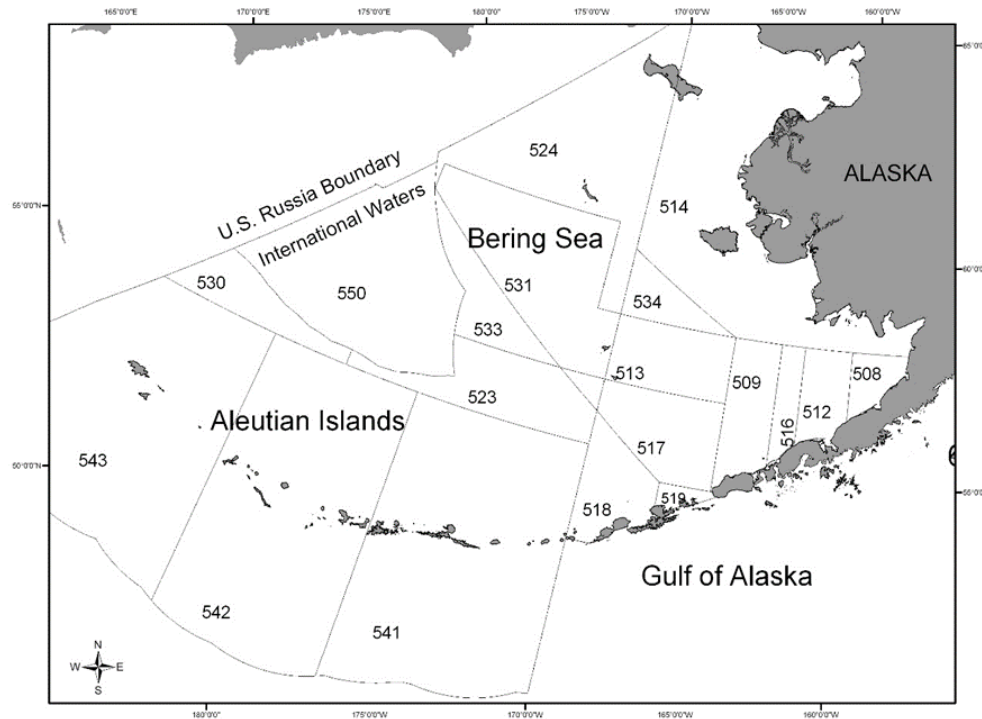
Under the MSA (16 U.S.C. 1801, *et seq.*), the United States has exclusive fishery management authority over all marine fishery resources found within the exclusive economic zone (EEZ). The management of these marine resources is vested in the Secretary of Commerce (Secretary) and in the Regional Fishery 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 groundfish fisheries in the EEZ off Alaska are managed under the FMP for Groundfish of the Bering Sea and Aleutian Islands Management Area (BSAI FMP) and the FMP for Groundfish of the Gulf of Alaska (GOA FMP). The proposed action under consideration would amend the BSAI Groundfish FMP and Federal regulations at *50 CFR §679*. Actions taken to amend FMPs or implement regulations governing these fisheries must meet the requirements of applicable Federal laws, regulations, and Executive Orders.

### **3.2. BSAI Pacific Cod Fishery Management**

BSAI Pacific cod harvest specifications establish an over-fishing level (OFL), ABC, and TAC for the Bering Sea subarea of the BSAI, and a separate OFL, ABC, and TAC for the Aleutian Islands subarea of the BSAI. Figure 3-1 shows the BSAI Pacific cod reporting areas.

Before the Pacific cod TACs are established, the Council and NMFS consider social and economic factors, management uncertainty, as well as two factors relevant to BSAI Pacific cod: Pacific cod guideline harvest (GHL) fisheries that occur in the State-waters of the BSAI, and an overall 2 million mt optimum yield limit on the maximum amount of TAC that can be specified for all BSAI groundfish. Pacific cod TACs are specified at levels that account for the GHL fisheries so the combined harvest limits from GHL fisheries and the TACs do not exceed the ABCs specified for the BS or AI.



**Figure 3-1 Map of NMFS BSAI sub-areas for management**

Once separate BS and AI TACs are established, regulations at § 679.20(a)(7)(i) allocate 10.7 percent of the BS Pacific cod TAC, and 10.7 percent of the AI Pacific cod TAC, to the CDQ program for the exclusive harvest by Western Alaska CDQ groups. The remaining portion of BS and AI TACs, after deducting the 10.7 percent allocation for CDQ Program, is the initial total allowable catch (ITAC). For the BSAI Pacific cod H&L and pot gear sectors, the Regional Administrator will specify the amount of Pacific cod that NMFS estimates will be taken as incidental catch while fishing for groundfish other than Pacific cod by the H&L and pot gear sectors. This amount will be the incidental catch allowance (ICA) specified in the harvest specifications and will be deducted from the aggregate portion of Pacific cod TAC annually allocated to the H&L and pot gear sectors before the allocations are made to these sectors. Since Amendment 85 implementation this amount has been 400 to 500 mt. After the CDQ allocation is subtracted from the BS and AI TACs, NMFS combines the remaining BS and AI TACs into one BSAI non-CDQ TAC, which is available for harvest by nine non-CDQ fishery sectors. Table 3-1 shows the BSAI Pacific cod ABC, TAC, and ITAC from 2003 to 2013 and Bering Sea and Aleutian Island BSAI Pacific cod ABC, TAC, and ITAC 2014 to 2022 (amounts in mt).

Regulations at § 679.20(a)(7)(ii)(A) define the nine Pacific cod non-CDQ fishery sectors in the BSAI and specify the percentage allocated to each. The non-CDQ fishery sectors are defined by a combination of gear type, operation type, and vessel size categories. Through the annual harvest specifications process, NMFS allocates an amount of the combined BSAI non-CDQ TAC to each of the nine non-CDQ fishery sectors.

The nine non-CDQ fishery sectors, and the percentage of the combined BSAI non-CDQ TAC allocated to each sector, are shown in Table 3-2 by amendment since 1994. Beginning in 1994, Amendment 24 to the BSAI groundfish FMP established a TAC for BSAI non-CDQ, which was fully distributed among three gear sectors: H&L, pot, trawl, and jig gear. The allocations for each sector were set under the FMP and reflected percentages of sector harvest between 1991 to 1993. Those allocations were later changed in 1997 with Amendment 46 of the FMP and shifted the majority of the TAC from trawl to H&L and pot

gear. Amendment 46 also bisected trawl apportionment between CVs and CPs and authorized NMFS to reallocate any portion of the Pacific cod TAC that was projected to remain unused among the various sectors if necessary. Subsequent apportionment changes (BSAI Amendments 64, 67, and 77) have resulted in the BSAI Pacific cod TAC being divided among nine harvesting sectors. Amendment 85 modified the BSAI non-CDQ Pacific cod TAC allocation and defined specific harvesting sectors. The existing overall sector allocations have been in place for fourteen years under Amendment 85.

**Table 3-1 BSAI Pacific cod ABC, TAC, and ITAC from 2003 through 2013 and BS and AI Pacific cod ABC, TAC, and ITAC from 2014 through 2022 (amounts in mt)**

Year	BSAI			BS*			AI**								
	ABC	TAC	ITAC	ABC	TAC	ITAC	ABC	TAC	ITAC						
2003	223,000	207,500	191,938	N/A											
2004	223,000	215,500	199,338												
2005	206,000	206,000	190,550												
2006	194,000	194,000	174,067												
2007	176,000	170,720	157,916												
2008	176,000	170,720	152,453												
2009	182,000	176,540	157,650												
2010	174,000	168,780	150,721												
2011	235,000	227,950	203,559												
2012	314,000	261,000	233,073												
2013	307,000	260,000	232,180												
2014	N/A									255,000	246,897	220,479	15,100	6,997	6,248
2015										255,000	240,000	214,320	17,600	9,422	8,414
2016										255,000	238,680	213,141	17,600	12,839	11,465
2017				239,000	223,704	199,768	21,500	15,695	14,016						
2018				201,000	188,136	168,005	21,500	15,695	14,016						
2019				181,000	166,475	148,662	20,600	14,214	12,693						
2020				137,000	124,625	111,290	20,600	14,214	12,693						
2021				123,805	111,380	499,462	20,600	13,756	12,320						
2022				153,383	136,466	121,864	20,600	13,796	12,320						

Source: NMFS Final Specifications

\*The BS Pacific cod TAC accounts for the GHL in State waters of the BS, which is 11 percent of the BS ABC as of 2022.

\*\*The AI Pacific cod TAC accounts for the GHL in State waters of the AI, which would be 39 percent of the AI ABC as of 2022, except the AI GHL may not exceed 15 million pounds (6,804 mt).

**Table 3-2 Percent of non-CDQ BSAI Pacific cod sector allocations by BSAI groundfish FMP amendment**

<b>Sector</b>	<b>Amend 24 1994</b>	<b>Amend 46 1997</b>	<b>Amend 64 2000</b>	<b>Amend 77 2004</b>	<b>Amend 85 2008</b>
<b>Jig</b>	2.0	2.0	2.0	2.0	1.4
<b>H&amp;L/Pot CV &lt;60' LOA</b>	44.0	51.0	0.7	0.7	2.0
<b>H&amp;L CV ≥60' LOA</b>			0.2	0.2	0.2
<b>H&amp;L CP</b>			40.8	40.8	48.7
<b>Pot CV ≥60' LOA</b>			9.3	7.6	8.4
<b>Pot CP</b>				1.7	1.5
<b>AFA trawl CP</b>	54.0	23.5	23.5	23.5	2.3
<b>Non-AFA trawl CP</b>					13.4
<b>Trawl CV</b>					23.5

Seasonal allowances of BSAI non-CDQ Pacific cod allocations are managed at the BSAI level. Because there are no non-CDQ sector allocations specific to each area, there are no gear specific seasonal allowances by area. An allocation to a non-CDQ fishery sector may be harvested in either the BS or the AI, subject to the non-CDQ Pacific cod TAC specified for the BS or the AI. If the non-CDQ Pacific cod TAC is or will be reached in either the BS or AI, NMFS will prohibit directed fishing for Pacific cod in that subarea for all non-CDQ fishery sectors. The other area will remain open to directed fishing for all sectors as long as Pacific cod TAC is available in that area and the sector has Pacific cod available from their BSAI allocation.

While the overall guideline for the BSAI Pacific cod fishery continues to be a 70:30 percent seasonal split, the seasonal allowances vary by gear type taking into account changes to the season dates from the Steller sea lion protection measures implemented in 2015. Any unused portion of the seasonal allowance from any sector *except the jig sector* is rolled over to that sector's next season during the current fishing year unless the Regional Administrator determines that sector will be unable to harvest its allocation. Unused jig TAC from any season will be reallocated to the less than 60' H&L or pot CV sector and any projected unused portion of the C season jig TAC must be reallocated on or near September 1 (50 CFR 679.20(a)(7)(iv)(C)).

NMFS manages each of the non-CDQ fishery sectors to ensure harvest of Pacific cod does not exceed the overall annual allocation made to each of the non-CDQ fishery sectors. NMFS monitors harvests that

occur while vessels are directed fishing for Pacific cod (specifically targeting and retaining Pacific cod above specific threshold levels) and harvests that occur while vessels are directed fishing in other fisheries and incidentally catching Pacific cod (e.g., the incidental catch of Pacific cod in the pollock directed fishery or IFQ fishery). For the non-CDQ fishery sectors, NMFS carefully tracks both directed and incidental catch of Pacific cod. NMFS takes appropriate management measures, such as closing directed fishing for a non-CDQ fishery sector, to ensure that total directed fishing and incidental fishing harvests do not exceed that sector’s allocation.

**Table 3-3 2022 BSAI Pacific cod non-CDQ sector allocations and seasonal allowances**

Sector	BSAI Sector Allocation (mt)	BSAI Seasons and allowance (mt)		
		A	B	C
<b>H&amp;L/Pot CV &lt; 60’ LOA</b>	2,671	No seasonal allowances		
<b>H&amp;L CV ≥ 60’ LOA</b>	267	<i>Jan 1-June 10 (51%)</i> 136	<i>June 10 -Dec 31 (49%)</i> 131	n/a
<b>H&amp;L CP</b>	65,027	<i>Jan 1-June 10 (51%)</i> 33,164	<i>June 10 -Dec 31 (49%)</i> 31,863	n/a
<b>Pot CV ≥ 60’ LOA</b>	11,216	<i>Jan 1-June 10 (51%)</i> 5,720	<i>Sept 1 -Dec 31 (49%)</i> 5,496	n/a
<b>Pot CP</b>	2,003	<i>Jan 1-June 10 (51%)</i> 1,021	<i>Sept 1 -Dec 31 (49%)</i> 981	n/a
<b>Jig</b>	1,879	<i>Jan 1- Apr 30 (60%)</i> 1,127	<i>Apr 30-Aug 31 (20%)</i> 376	<i>Aug 31- Dec 31 (20%)</i> 376
<b>AFA Trawl CP</b>	3,086	<i>Jan 20-April 1 (75%)</i> 2,315	<i>April 1-June 10 (25%)</i> 772	<i>June 10- Nov 1 (0%)</i> 0
<b>Amendment 80</b>	17,981	<i>Jan 20-April 1 (75%)</i> 13,485	<i>April 1-June 10 (25%)</i> 4,495	<i>June 10- December 31 (0%)</i> 0
<b>Trawl CV</b>	29,655	<i>Jan 20-April 1 (74%)</i> 21,944	<i>April 1-June 10 (11%)</i> 3,262	<i>June 10-Nov 1 (15%)</i> 4,448

Source: NMFS Final 2022 Sector Allocations and Seasonal Allowances of the BSAI Pacific Cod TAC;  
[https://www.govinfo.gov/content/pkg/FR-2022-03-02/pdf/2022-04292.pdf?utm\\_campaign=subscription+mailing+list&utm\\_source=federalregister.gov&utm\\_medium=email](https://www.govinfo.gov/content/pkg/FR-2022-03-02/pdf/2022-04292.pdf?utm_campaign=subscription+mailing+list&utm_source=federalregister.gov&utm_medium=email)

### 3.3. Reallocations Among BSAI Pacific Cod Sectors

Decisions to reallocate BSAI Pacific cod TAC are based on the hierarchy set in Federal regulations at §679.20(a)(7)(iii). Reallocation decisions take into account the capability of a sector to harvest both their initial Pacific cod allocation and any reallocations they may receive. Any reallocation of Pacific cod requires publication in the *Federal Register* before it is effective. This process generally takes about a week.

In the BSAI, most sector's A season allocations are fully harvested, and if not, any remaining A season allowance rolls over to the next season for that sector. Therefore, reallocations of A season TAC are rare. One exception is the BSAI Pacific cod jig sector where any projected unused portion of the A season allowance is required to be reallocated to the less than 60' H&L or pot CV sector. The less than 60' H&L or pot CV sector does not have seasonal allowances under Steller sea lion protection measures. Instead, this sector's annual allocation is available on January 1, and they have historically relied on reallocations from other sectors to have fishing reopen later in the year once their annual allocation has been harvested. NMFS has historically reallocated most of the jig sector's A-season allowance to the less than 60' H&L or pot CV sector (typically between January and March). The less than 60' H&L or pot CV sector has received seasonal reallocations from the BSAI Pacific cod jig, greater than or equal to 60' H&L CV, greater than or equal to 60' pot CV, and trawl sectors.

NMFS tries to reallocate projected amounts of unharvested Pacific cod to sectors that may be able to harvest these amounts; however, the decision to reallocate these amounts are complex and factor in many considerations. The primary consideration is not to reallocate Pacific cod from a sector that may have the capacity to catch their allocation. This means NMFS must first determine a sector's remaining Pacific cod allocation and the capacity for the sector to catch the remaining amount. This requires communication with vessel operators and processors. If any vessel operator or processor indicates that they will remain active or become active in the fishery before the end of the year, NMFS will likely be more conservative in leaving amounts of Pacific cod available for that sector. As a result, Pacific cod sometimes remains uncaught at the end of the year because these vessels either do not participate or their actual catch rates are insufficient to catch a sector's remaining Pacific cod.

For example, in the fall, some sectors fishing effort may decrease or stop for several reasons including (but not limited to) poor weather, low catch rates, directed fishing closures due to attainment of prohibited species catch limits, low Pacific cod prices, high fuel prices, vessel breakdowns or maintenance, or closure of directed fishing for all non-CDQ Pacific cod sectors in the BS subarea or AI subarea. These factors can be difficult to predict when NMFS considers whether to make Pacific cod reallocations. NMFS will also consider that catch data may change over time. To prevent exceeding TAC or ABC, NMFS typically leaves small amounts of TAC as a buffer to account for changes in catch data, which may occur for a variety of reasons. Also, in recent years until 2022, the BSAI Pacific cod TAC has decreased; therefore, less Pacific cod TAC is remaining for the sectors that have historically been provided reallocated Pacific cod. As a result, NMFS must be more conservative in completing reallocations.

In October 2021, the Council selected, as a preferred alternative, to create a BSAI Pacific cod trawl CV limited access privilege program (NPFMC 2021). The preferred alternative would allocate quota shares to groundfish LLP licenses based on the harvest of qualifying trawl CV BSAI Pacific cod catch. As part of the preferred alternative, only A and B season quota share would be allocated to cooperatives leaving the 15 percent C season allowance as a limited access trawl CV fishery for any vessel assigned to an eligible groundfish LLP license with applicable area endorsements. The C season limited access trawl CV fishery would be managed as it is currently by NMFS, including management of incidental catches of Pacific cod in other directed fisheries. Remaining trawl CV C season, A season and B season ICAs that NMFS projects to go unused, and any remaining cooperative quota after the B season would be



subject to reallocation to other sectors under current reallocation rules. As a result of leaving the C season as a limited access fishery for the trawl CV sector, reallocation of Pacific cod TAC to other sectors that rely on Pacific cod reallocations would likely continue. Typically, the reallocation from the BSAI Pacific cod jig sector, but also the trawl CV sector, allows the less than 60' H&L or pot CV sector to remain open during the fall.

### 3.4. License Limitation Program

Since 2000, a Federal LLP license is required for vessels participating in directed fishing for LLP groundfish species.<sup>7</sup> LLP groundfish species are target species and “other species” specified annually pursuant to Federal regulations at 679.20(a)(2). Vessels in the less than 60' H&L or pot CV sector need a non-trawl LLP to participate in the Federal fisheries, but they are exempt from the Pacific cod endorsement on their LLP because they are less than 60' (see 679.4(k)(9)(iv)(B)). In 2021, 26 vessels participated in the less than 60' H&L or pot sector with both an FFP and LLP.<sup>8</sup> Vessels fishing in the BSAI Pacific cod jig sector do not need an LLP license in the BSAI if they are less than 60' LOA and use no more than five jig machines, one line per machine, and 15 hooks per line. There are no AI or BS jig LLPs.

Historically, the LLPs have not generally been applicable in State waters (inside 3 nm), but in 2012 NMFS implemented regulations to limit the access of Federally permitted pot and H&L CPs in the Pacific cod parallel fishery<sup>9</sup> for the BS and AI (76 FR 73513) by requiring a Federally permitted pot or H&L CP to have the appropriate LLP endorsements to participate in the parallel fishery. In 2021 these regulations were extended to include CV pot, H&L, and any trawl vessels. Federally permitted vessels with no LLP may participate in the state-managed GHL fishery, subject to vessel length restrictions, but may not fish in state-waters (the parallel fishery) while the Federal season is open. Vessels that are not Federally permitted (do not have an FFP) are not required to hold an endorsed LLP to participate in the parallel fishery but are subject to State regulations. A vessel may surrender its FFP and fish exclusively in State waters, but this is limited to once in each 3-year FFP cycle so that a vessel may not frequently surrender an FFP and later reapply for an FFP multiple times within each 3-year period. This limits the ability for a vessel to move in and out of Federal requirements (85 FR 78038).

### 3.5. State Management Measures

The State manages three GHL fisheries for Pacific cod within State waters in the BSAI. There is one GHL fishery for Pacific cod in the AI, the AI Subdistrict fishery. There are two that occur in a subarea of the BS, the DHS pot fishery and the DHS jig fishery.

The State-managed AI fishery was established by the BOF in 2006. From 2006 through 2015, the AI GHL was 3 percent of the Federal BSAI Pacific cod ABC. In December 2015, the Alaska Board of Fisheries (BOF) changed the AI GHL calculations to better align with the split of the Federal BSAI Pacific cod stock into separate BS and AI stocks. Starting in 2016, the AI GHL was 27 percent of the AI ABC. The AI State Pacific cod management plan includes annual “step-up” provisions that increase the amount of the GHL fishery if at least 90 percent of the previous year’s GHL is harvested. If the GHL

---

<sup>7</sup> There are a few exceptions for LLP requirements in the BSAI. This includes vessels that do not exceed 32' LOA; vessels that are at least 32' LOA but that do not exceed 46' LOA that are registered with their CDQ group to harvest CDQ groundfish; vessels that do not exceed 60' LOA and are using jig gear (but no more than 5 jig machines, one line per machine, and 15 hooks per line); and certain vessels constructed for and used exclusively in the CDQ fisheries.

<sup>8</sup> LLP draws from the NMFS RAM division LLP database and was sourced through Alaska Fisheries Information Network (AKFIN).

<sup>9</sup> The BSAI Pacific cod parallel fishery occurs when the State opens State waters while the Federal BSAI Pacific cod fishery is open and any harvest that occurs in State waters is deducted from Federal TAC.

fishery continues to be nearly fully harvested it can increase annually by 4 percent up to a maximum of 39 percent of the AI ABC or to a maximum of 6,804 mt (15 million lbs.), whichever is less. The 2020 and 2021 AI GHL were capped at 15 million pounds (6,804 mt).

Allowable gear in the AI GHL fisheries includes trawl, longline, pot, and jig gear. Allowable vessel size varies by gear sector and time of year. The majority of the AI GHL has been harvested by vessels using trawl and pot gear. Table 3-4 summarizes the State AI GHL participation, catch, and value for the years 2006 through 2021. Additional information on the AI GHL fishery can be found in the AI Pacific Cod Harvest Set-Aside RIR that addressed issues with Amendment 113 (NPFMC 2018).

## Attachment 2, page 23 of 77

**Table 3-4 Aleutian Islands State-waters Pacific cod fishery guideline harvest level and harvest from 2006 through 2021**

Year	Season	Initial GHL <sup>a</sup>		Harvest <sup>a</sup>	Vessels		Landings	Average price per pound <sup>b</sup>	Fishery value <sup>c</sup>
2006	A season	4,071		3,857	26		68	\$0.23	\$1.30
	B season	1,745	d	160	5		19	\$0.38	\$1.40
	TOTAL	5,815		4,017	30	e	87	\$0.31	\$2.70
2007	A season	3,693		3,733	27		97	\$0.45	\$3.60
	B season	1,583	f	1,546	12		106	\$0.52	\$1.70
	TOTAL	5,276		5,279	39	e	203	\$0.49	\$5.30
2008	A season	3,696		3,392	30		116	\$0.63	\$4.50
	B season	1,584	g	1,924	18		77	\$0.57	\$1.80
	TOTAL	5,280		5,316	45	e	193	\$0.61	\$6.30
2009	A season	3,822		2,512	22		50	NA	NA
	B season	1,638	g	CF	5		47	CF	CF
	TOTAL	5,460		CF	27		97	CF	CF
2010	A season	3,654		3,610	16		84	\$0.25	\$1.60
	B season	1,566	g	375	3		4	\$0.32	\$1.10
	TOTAL	5,220		3,985	16	e	88	\$0.29	\$2.70
2011	A season	4,935		CF	3		4	CF	CF
	B season	2,115	g	CF	4		16	CF	CF
	TOTAL	7,050		270	6	e	20	CF	CF
2012	A season	6,594		5,199	21		201	\$0.31	\$3.60
	B season	2,826	g	432	7		25	CF	CF
	TOTAL	9,420		5,598	26	e	226	CF	CF
2013	A season	6,447		CF	12		CF	CF	CF
	B season	2,763	g	CF	1		CF	CF	CF
	TOTAL	9,210		4,792	13		151	CF	CF
2014	A season	5,672		CF	8		133	CF	CF
	B season	2,431	g	0	0		0	\$0.00	\$0.00
	TOTAL	8,103		CF	8		133	CF	CF
2015	A season	5,725		CF	2		CF	CF	CF
	B season	2,453	g	0	0		0	\$0.00	\$0.00
	TOTAL	8,178		CF	2		CF	CF	CF
2016		4,752	h	CF	6		39	CF	CF
2017		5,805	h	CF	3		84	CF	CF
2018		5,805	h	CF	13		132	CF	CF
2019		6,386	h	6,198	18		155	\$0.38	\$5.08
2020		6,804	h	6,762	15		187	\$0.35	\$5.12
2021		6,804	h	6,703	13		170	\$0.38	\$5.44

Source: ADF&amp;G

Note: CF = Confidential

<sup>a</sup> In metric tons<sup>b</sup> Price per pound of landed weight.<sup>c</sup> Fishery value based on landed weight, in millions of dollars.<sup>d</sup> ADF&G made 3.5 million pounds of the GHL available to NMFS effective on September 1.<sup>e</sup> Some vessels participated in both seasons.<sup>f</sup> Overage from the A season was deducted from the B season GHL. Initial GHL shown.<sup>g</sup> A season GHL was not fully harvested, remaining A season GHL rolled over into B season GHL; initial GHL shown.<sup>h</sup> Regulation changed to only one season for Aleutian Island Subdistrict state-waters Pacific cod.

In October 2013, the Alaska Board of Fisheries (BOF) created a DHS State-waters Pacific cod fishery management plan for the Bering Sea, and the DHS fishery was first opened to pot fishing in 2014. The DHS fishery is open to vessels less than or equal to 58’ LOA using pot gear with a limit of 60 pots per vessel. The DHS fishery season opens seven days after the federal BSAI less than 60’ H&L or pot CV sector’s closure and may close and re-open as needed to coordinate with Federal fishery openings. A summary of the regulations is provided in Table 3-5.<sup>10</sup>

**Table 3-5 Summary of Dutch Harbor Subarea State-waters Pacific cod guideline harvest fishery regulations**

Area	DHS state-waters opens	DHS state-waters closes	Gear	Vessel length
<b>Dutch Harbor Subarea GHL pot gear fishery</b>	<ul style="list-style-type: none"> <li>The DHS state-waters Pacific cod season will open by emergency order 7 days after closure of the initial Federal BSAI Pacific cod season for the &lt; 60’ H&amp;L and pot gear CV sector.</li> <li>The DHS State-waters fishery can reopen if GHL Pacific cod vessels are available when the Federal BSAI Pacific cod &lt; 60’ H&amp;L /pot gear CV sector closes after harvesting any reallocation.</li> <li>The DHS is defined as waters between 162.30 and 170 west longitude.</li> </ul>	<ul style="list-style-type: none"> <li>When the GHL is taken or at the regulatory season closure date (December 31), whichever comes first.</li> <li>If the Federal BSAI Pacific cod &lt; 60’ H&amp;L/pot gear CV sector receives a reallocation of Federal TAC and is reopened, the DHS state- waters Pacific cod season may close.</li> </ul>	<ul style="list-style-type: none"> <li>Pot gear vessels using 60 or fewer pots unless the Commissioner modifies regulations after October 1.</li> <li>DHS is an exclusive registration area for Pacific cod and participants must purchase buoy tags and attach a tag to each pot prior to fishing.</li> </ul>	Less than or equal to 58’ LOA, unless modified by ADF&G news release after October 1.
<b>Dutch Harbor Subarea GHL jig gear fishery</b>	<ul style="list-style-type: none"> <li>May 1 opens a 100,000 lb. fishery.</li> </ul>	<ul style="list-style-type: none"> <li>When the GHL is taken or at the regulatory season closure date (December 31) whichever occurs first.</li> </ul>	<ul style="list-style-type: none"> <li>Jig gear with a limit of 5 jigging machines.</li> <li>The limit on the number of jigging machines may be lifted by the commissioner any time after October 1, to allow the fleet to harvest the GHL.</li> </ul>	Less than or equal to 58’ LOA

Source: <http://www.adfg.alaska.gov/FedAidPDFs/FMR18-05.pdf>

Under current State regulations, each year the DHS fishery is set at 8 percent of the BS ABC with an annual 1 percent increase if 90 percent of the GHL is harvested until the GHL reaches 15 percent of the BS ABC. The 15 percent GHL will continue unless changed by the BOF. The 2022 DHS fishery was set at 11 percent of the BS ABC. The GHL amount and reported harvest from 2014 to 2021 for this fishery

<sup>10</sup> In 2014 and 2015, the DHS fishery occurred in the area between 164 degrees and 167 degrees west longitude. The area was expanded east and west to between 164 degrees and 170 degrees west longitude prior to the 2016 season and again expanded westward prior to the 2019 season to 162.30 degrees west longitude. At the BOF October 2018 meeting it again expanded the area to include waters between 162.30 degrees and 170 degrees west longitude.

are shown in Table 3-6. All landings from the DHS pot fishery are delivered to shoreside plants and inshore floating processors because the fishery is prosecuted by pot vessels that are less than or equal to 58’ LOA. Thirty-seven pot gear vessels participated in the fishery in 2019, 40 pot gear vessels in 2020, and 29 pot gear vessels in 2021.

**Table 3-6 Pacific cod harvest (lbs.) with pot gear in the State of Alaska DHS GHL Pacific cod fishery from 2014 through 2021**

Year	GHL		Harvest		% harvested
	Pounds	mt	Pounds	mt	
2014	17,863,874	8,103	17,666,510	8,013	98.90%
2015	18,029,404	8,178	17,636,103	8,000	97.80%
2016	35,979,072	16,320	35,519,920	16,112	98.70%
2017	33,721,562	15,296	33,247,414	15,081	98.60%
2018	28,360,000	12,864	29,055,603	13,180	102.50%
2019	31,922,600	14,480	32,345,033	14,672	101.30%
2020	30,927,000	14,028	30,928,649	14,029	100.00%
2021	27,292,000	12,380	27,585,848	12,513	101.00%

Source ADF&G

The BOF created a second BS GHL fishery which began in 2019 and allocates 100,000 lb. or roughly 45 mt. to jig vessels. The fishery was not opened to jig gear until 2019 because the Federal jig season typically occurs year-round, so there has historically been no benefit to having a separate jig gear GHL state-waters fishery. The DHS jig gear fishery is not a super-exclusive fishery, so persons may register and fish that fishery and other State fisheries for Pacific cod. As noted in Table 3-7, one vessel has participated in the fishery on an annual basis, so harvest information is confidential for the DHS jig fishery; however, the GHL was achieved in 2019.

**Table 3-7 Dutch Harbor Subdistrict State-waters Pacific cod jig fishery harvest, effort, value, and season dates, 2019 through 2021**

Year	GHL (lbs.)	Harvest (lbs.)	Vessels	Landings	Average price per pound	Fishery value	Season dates		Season duration (days)
							Opened	Closed	
2019	100,000	CF	1	5	CF	CF	5/1/2019	6/6/2019	37
2020	100,000	CF	1	4	CF	CF	5/1/2020	12/31/2020	245
2021	100,000	CF	1	3	CF	CF	5/1/2021	12/31/2021	245

Source ADF&G

### 3.6. Impacted Sectors

#### 3.6.1. BSAI Pacific Cod Less Than 60’ H&L or Pot CV Sector

The less than 60’ H&L or pot CV sector includes all CVs that are less than 60’ LOA using H&L or pot gear, but the typical length of vessels that participate in this sector ranges from 28’ to 58’ LOA. Since 2000, a Federal LLP license has been required for vessels participating in directed fishing for LLP groundfish species, unless exempt (see Section 3.4). Vessels in this sector need a non-trawl LLP to participate in the Federal fisheries, but they are exempt from the Pacific cod endorsement on their LLP, see § 679.4(k)(9)(iv)(B). Currently, an LLP holder can switch from H&L or pot gear to legal jig gear and prosecute the jig sector’s allocation if their vessel was configured in such a way to use all the gear types.

From 2008 through 2021, the number of vessels participating in the less than 60’ H&L or pot CV sector has ranged from a low of 21 in 2014 to high of 41 in 2020. The annual average level of participation in

the BSAI Pacific cod less than 60' H&L or pot CV sector is 27 vessels. The sector has had a 2 percent allocation of BSAI Pacific cod since Amendment 85 was implemented in 2008, and they receive their entire allocation on January 1 each year because CVs less than 60' are not subject to the seasonal restrictions that apply to other vessels. The amount of harvested Federal BSAI Pacific cod has ranged from a low of 4,469 mt in 2009 to a high of 12,448 mt in 2014. There has been a gradual shortening of the initial fishing period when the sector harvests its initial allocation as the number of days this sector needs to harvest its initial allocation has been reduced from nearly 75 to as little as 12 days. In 2021, the sector closed on January 26 and had 26 vessels participate.

The sector routinely harvests their entire initial allocation in addition to a significant portion of BSAI Pacific cod reallocated from other sectors. Reallocation amounts to the less than 60' H&L or pot CV sector have ranged from a low of 1,297 mt in 2009<sup>11</sup> to high of 7,500 mt in 2014. On average, the less than 60' H&L or pot CV sector has harvested 214 percent of its initial allocation since 2008. The less than 60' H&L or pot CV sector has historically received reallocations from the BSAI Pacific cod jig, greater than or equal to 60' H&L CV, greater than or equal to 60' pot CV, and trawl sectors. However, the jig sector has consistently reallocated Pacific cod to the less than 60' H&L or pot CV sector since 2008. On average, reallocations from the jig sector have accounted for 30 percent of the less than 60' H&L or pot CV sector's final allocation (Table 3-8).

The less than 60' H&L or pot CV sector receives a reallocation from the jig sector early in the year which extends their season to harvest Pacific cod. In the past, NMFS was able to reallocate more BSAI Pacific cod TAC to the less than 60' H&L or pot sector in the spring but this has not occurred in recent years due to the increased effort in the BSAI Pacific cod fisheries, coinciding with a decrease in overall allocations for all BSAI Pacific cod sectors. Regulations require another reallocation from the jig sector to the less than 60' H&L or pot CV sector on or around September 1 if unused TAC is projected in the jig sector, and NMFS has historically been able to open the sector on September 1.

H&L or pot CVs participating in the sector primarily focus on halibut, groundfish, and salmon using a mix of gear types. The length of these vessels allows them to participate in State of Alaska salmon fisheries which usually requires vessels to be no longer than 58' (however, vessels must be 32' or less to participate in Bristol Bay salmon drift gillnet fishery). From 2008 through 2020, the total gross ex-vessel revenue for all fisheries for vessels participating in the less than 60' H&L or pot CV sector has ranged from \$21.30 million in 2009 to \$41.65 million in 2019.<sup>12</sup> The gross ex-vessel revenue for Federal BSAI Pacific cod has ranged from \$3.34 million in 2009 to \$8.66 million in 2019, and the annual average amount of gross ex-vessel revenue for this fishery is \$6.76 million during the same time period. However, the IFQ fishery has contributed the largest percent of total gross ex-vessel revenue for the sector at 32 percent, followed by the Federal BSAI Pacific cod and GHL Pacific cod fisheries at 21 and 20 percent respectively (on average). Other fishing activities by the vessel size category include salmon and GOA Pacific cod, which in recent years has diminished due to the decline in the GOA Pacific cod biomass and the resulting limitations on the GOA Pacific cod fishery.

Fishing activity in the AI and DHS GHL fisheries by vessels operating in the BSAI Pacific cod less than 60' H&L or pot CV sector has increased significantly, both in terms of the number of vessels and the amount of GHL Pacific cod that is harvested. Since 2014, the majority of the Pacific cod harvested in BSAI GHL fisheries is taken in the DHS pot fishery. Prior to 2014, fishing activity occurred in the AI GHL fishery because it was the only GHL fishery in the BSAI. The number of less than 60' H&L or pot

---

<sup>11</sup> 1,297 mt is derived from the 1,600 mt reallocation from the jig sector minus the reallocation of 303 mt from the less than 60' H&L or pot sector to other sectors.

<sup>12</sup> Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; small\_boat\_div(12-6-21)

CVs that also participate in the AI and DHS GHL fisheries has ranged from a low of zero participating vessels in 2010 to 35 in 2020, harvesting between 3 mt in 2011 to 14,655 mt in 2018.<sup>13</sup>

Provided in Table 3-9 are data on the less than 60' H&L or pot CV sector's ex-vessel price (2020 real \$) for BSAI Pacific cod, gross ex-vessel revenue for BSAI Pacific cod, and the gross first wholesale value of BSAI Pacific cod from 2008 through 2020. The price for BSAI Pacific cod has ranged from a high of \$.60 in 2008 to a low of \$.27 in 2009 and 2015; the average price for BSAI Pacific cod during this time period is \$.35. Gross first wholesale value has ranged from \$5 million in 2009 to \$19 million in 2014 and 2018.

Table 3-10 shows the total deliveries of Federal BSAI Pacific cod for the less than 60' H&L or pot CV sector as well as the total number of ports within the bounds of confidentiality restrictions. The number of ports the sector has delivered BSAI Pacific cod to has ranged from a low three in 2014, 2016, and 2017 to a high of seven in 2019. Of the delivery ports, Dutch Harbor/Unalaska has routinely received the most deliveries from the less than 60' H&L or pot CV sector during the analyzed period.

Table 3-11 provides data on the annual halibut mortality, and red king crab, bairdi, *C. opilio*, Chinook salmon PSC, and non-Chinook salmon PSC for the sector while targeting BSAI Pacific cod from 2008 to 2021. The pot CVs in the less than 60' H&L or pot CV sector do not have PSC limits for halibut, crab, or salmon. The H&L CVs in this sector, however, share a halibut PSC limit with the greater than or equal to 60' H&L CVs. The BSAI H&L CV Pacific cod fishery has never reached the halibut PSC limit for this sector. Halibut mortality for the H&L vessels operating in the sector ranges from a low of one mt to a high of 7 mt in 2014.

Table 3-12 provides a count, by community of ownership address and year from 2008 through 2020, for vessels participating in the less than 60' H&L or pot CV sector for all Alaska communities as well as Washington and other states (primarily Oregon and California) with any vessels active in the sector. The less than 60' H&L or pot CV sector is a geographically diverse fleet; however, 71 vessels (76 percent) that participated in the less than 60' H&L or pot CV sector have a registered ownership address in an Alaska community.

---

<sup>13</sup> Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive\_BLEND\_CA; sector\_landings\_tgt\_SMPC(5-3-22).

**Table 3-8 Count of vessels in the BSAI Pacific cod less than 60' H&L or pot CV sector, the sector's initial allocation (mt), reallocation amounts from other sectors (mt), and final allocation (mt) from 2008 through 2021**

Year	Vessel count for target fishery	Initial allocation (mt)	Final allocation (mt)	Final allocation as a % of initial allocation	Reallocation (mt) from jig sector	Reallocation (mt) from other sectors	Jig reallocation as a percent of final allocation
2008	31	3,033	5,210	172%	2,024	153	39%
2009	28	3,137	4,434	141%	1,600	-303	36%
2010	23	2,998	5,509	184%	1,760	751	32%
2011	22	4,055	9,005	222%	1,970	2,980	22%
2012	24	4,645	8,880	191%	2,800	1,435	32%
2013	27	4,627	9,177	198%	3,200	1,350	35%
2014	21	4,518	12,018	266%	3,073	4,427	26%
2015	25	4,438	10,630	240%	3,018	3,174	28%
2016	22	4,476	10,674	238%	3,050	3,148	28%
2017	24	4,259	9,271	218%	2,886	2,126	31%
2018	29	3,627	8,748	241%	2,400	2,721	24%
2019	36	3,214	9,800	305%	1,765	4,486	18%
2020	41	2,766	4,967	180%	1,927	274	39%
2021	26	2,222	4,444	200%	1,500	222	34%

Source: NOAA Fisheries Alaska Region, [BSAI Pacific cod reallocations \(1995–present\)](https://media.fisheries.noaa.gov/dam-migration/bsai-pcod-reallocation-1995-present.pdf) report at <https://media.fisheries.noaa.gov/dam-migration/bsai-pcod-reallocation-1995-present.pdf>

NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive\_BLEND\_CA; sector\_landings\_tgt(11-19-21)

**Table 3-9 Less than 60' H&L or pot CV sector BSAI Pacific cod ex-vessel price (\$), BSAI Pacific cod gross ex-vessel revenue (millions \$), BSAI Pacific cod gross first wholesale value (millions \$) from 2008 through 2020**

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Ex-vessel price (\$ per lbs.)	0.60	0.27	0.29	0.33	0.35	0.28	0.28	0.27	0.28	0.31	0.41	0.44	0.40
Gross ex-vessel revenue (millions \$)	7	3	4	6	7	6	8	6	6	7	8	9	4
Gross first wholesale value	11	5	8	14	14	13	19	14	16	17	19	15	7

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; sector\_landings\_rev(2-18-22)



**Table 3-10 Total number of less than 60' H&L or pot CV delivery ports and total number of deliveries of targeted BSAI Pacific cod from 2008 through 2020**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>Number of ports</b>	5	5	5	6	4	5	3	4	3	3	5	7	5
<b>Total deliveries</b>	278	274	203	255	291	293	*	350	*	*	279	332	219

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; small\_boat\_proc\_div(2-5-22) and small\_boat\_monthlylandings(2-15-22)

**Table 3-11 Halibut, crab, and salmon prohibited species catch by the less than 60' H&L or pot CV sector while targeting Federal BSAI Pacific cod from 2008 through 2021**

Species	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Halibut	5	3	2	2	2	4	7	3	1	1	5	2	1	1	30
Mortality (mt)															
Red King crab	9,063	957	407	1,535	1,126	18,543	31,626	51,730	457	5,405	45,383	6,515	3,569	52,471	218,361
C. Bairdi	340,701	151,108	66,444	69,719	30,199	47,632	178,562	127,075	32,396	90,979	28,825	15,025	9,464	2,794	632,668
C. Opilio PSC	0	0	0	0	0	0	0	0	0	0	0	0	47	0	47
Other C. Opilio	144,745	60,900	38,443	38,443	5,237	3,353	21,198	23,831	1,603	17,573	1,476	1,145	6,090	5,981	125,929
Chinook	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Non-Chinook	0	0	0	0	0	1	2	0	0	0	0	0	1	0	5

Source: AKFIN October 2021; sector\_PSC(10-1-21)

Table 3-12 Vessels <60' LOA targeting Federal BSAI Pacific cod with H&L or pot gear by community of vessel historic ownership address, 2008 - 2020

Region	Community	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Annual Average 2009-2020 (#)	Annual Average 2009-2020 (%)	Unique Vessels 2009-2020 (#)
		Alaska	Dutch Harbor/Unalaska	7	6	6	6	5	6	6	5	3	3	3	3	4	4.8
Anchor Point	2		2	1	0	0	0	0	0	0	0	0	0	0	0.4	1.42%	2
Homer	3		2	1	1	2	2	2	3	4	4	2	5	7	2.9	10.80%	16
Kodiak/Port Lions	7		3	5	5	5	5	4	4	4	4	5	9	9	5.6	20.74%	18
<b>Homer/Kodiak/Anchor Point</b>	<b>12</b>		<b>7</b>	<b>7</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>11</b>	<b>14</b>	<b>15</b>	<b>8.9</b>	<b>32.95%</b>	<b>36</b>
Adak	1		1	0	1	0	0	0	0	0	0	0	0	0	0.2	0.85%	2
Cordova	1		0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.28%	1
Delta Junction	0		0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.28%	1
Douglas	0		0	1	0	0	0	0	1	0	0	0	0	0	0.2	0.57%	2
False Pass	0		0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.28%	1
Girdwood	1		0	0	0	0	0	0	0	0	0	0	1	1	0.3	1.14%	2
Haines	0		0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.28%	1
Juneau	0		1	2	0	0	0	1	1	1	1	0	0	1	0.6	2.27%	4
Kenai	0		1	1	1	0	0	0	0	0	0	0	0	0	0.2	0.85%	1
Ketchikan	1		0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.28%	1
King Cove	0		0	0	0	0	0	0	0	0	0	0	0	2	0.2	0.57%	2
King Salmon	0		1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.28%	1
Klawock	0		0	0	0	0	1	0	1	0	0	0	0	0	0.2	0.57%	1
Mekoryuk	0		0	0	0	0	1	0	0	0	0	0	0	0	0.1	0.28%	1
Nikolaevsk	0		1	0	1	1	0	0	0	0	0	0	0	0	0.2	0.85%	2
Nome	0		0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.28%	1
Petersburg	0		1	1	0	0	1	0	2	3	2	3	2	4	1.5	5.40%	6
Sand Point	0		1	0	0	0	0	0	0	0	0	0	0	1	0.2	0.85%	2
Seward	0		0	0	0	1	1	1	1	1	1	1	1	1	0.7	2.56%	1
Sitka	0		0	0	0	0	0	1	0	0	0	0	0	1	0.2	0.57%	2
Soldotna	0		0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.28%	1
Wasilla	0		1	1	1	2	2	2	2	2	2	2	2	2	1.6	5.97%	2
Willow	0		1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.28%	1
<b>Other AK</b>	<b>4</b>		<b>8</b>	<b>6</b>	<b>3</b>	<b>4</b>	<b>6</b>	<b>5</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>7</b>	<b>12</b>	<b>13</b>	<b>6.8</b>	<b>25.28%</b>	<b>37</b>
<b>Alaska</b>	<b>23</b>		<b>21</b>	<b>19</b>	<b>15</b>	<b>16</b>	<b>19</b>	<b>17</b>	<b>20</b>	<b>18</b>	<b>18</b>	<b>21</b>	<b>29</b>	<b>32</b>	<b>20.6</b>	<b>76.14%</b>	<b>71</b>
WA	Bellingham	1	1	1	0	0	0	0	0	0	0	0	0	0	0.2	0.85%	1
	Dear Park	0	0	0	0	0	0	0	0	0	0	1	1	1	0.2	0.85%	1
	Elma	0	0	1	0	0	0	0	0	0	0	0	0	0	0.1	0.28%	1
	Friday Harbor	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.28%	1
	Montesano	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.28%	1
	Mount Vernon	0	1	1	1	2	1	1	1	0	0	1	1	0	0.8	2.84%	2
	Seattle	4	2	2	5	4	4	3	3	2	3	2	2	3	3.0	11.08%	13
	<b>Washington</b>	<b>6</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>4</b>	<b>5</b>	<b>4.5</b>	<b>16.48%</b>	<b>16</b>
<b>Other States</b>	<b>2</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>4</b>	<b>2.0</b>	<b>7.39%</b>	<b>12</b>	
<b>Grand Total</b>	<b>31</b>	<b>27</b>	<b>24</b>	<b>21</b>	<b>24</b>	<b>26</b>	<b>22</b>	<b>25</b>	<b>22</b>	<b>24</b>	<b>29</b>	<b>36</b>	<b>41</b>	<b>27.1</b>	<b>100.00%</b>	<b>91</b>	

### 3.6.2. BSAI Pacific Cod Jig Sector

The BSAI Pacific cod jig sector includes all vessels (CVs and CPs) using jig gear. Vessels in this sector do not need an LLP license in the BSAI if they are less than 60' LOA and are using no more than five jig machines, one line per machine, and 15 hooks per line. Note that all vessels less than or equal to 32' LOA operating in the BS and AI are not subject to LLP requirements.

The number of jig vessels participating in the sector from 2008 through 2021 has varied, ranging from a low of zero participating vessels in 2021 to a high of 15 participating vessels in 2008. The annual average level of participation is four vessels. Since 2008, the jig sector has harvested 16 percent of its initial allocation (on average). The three years where a higher percent of the initial allocation was utilized were 2010 at 17 percent, 2011 at 18 percent, and 2012 at 14 percent (Table 3-13). Due to the jig sector's relatively low utilization of its initial allocation, a significant portion has been reallocated to the less than 60 H&L or pot CV sector early in the year as required by Amendment 85 regulations.

From 2008 through 2020, the annual average total gross ex-vessel revenue for all fisheries for jig vessels is \$448,077, and the annual average gross ex-vessel revenue for jig vessels participating in the Federal BSAI Pacific cod fishery is \$98,541 during the same time period. However, State-waters GHL Pacific cod has contributed the largest percent of gross ex-vessel revenue for jig vessels at 24 percent, followed by the Federal BSAI Pacific cod fishery at 22 percent and IFQ fisheries at 19 percent from 2008 through 2020 (on average). Other fishing activities by the jig sector include GOA Pacific cod and salmon.<sup>14</sup>

Provided in Table 3-14 are data on the jig sector's ex-vessel price (2020 real \$) for BSAI Pacific cod, gross ex-vessel revenue for BSAI Pacific cod, and the gross first wholesale value of BSAI Pacific cod from 2008 through 2020. The price for BSAI Pacific cod has ranged from a low of \$.21 in 2013 to a high of \$.52 in 2008; the average price for BSAI Pacific cod for the jig sector is \$.33 during the same time period.

Overall, the jig sector has had a relatively low level of participation in the BSAI Pacific cod fishery and the majority of this sector's initial allocation—approximately 90 percent – has been reallocated to other BSAI Pacific cod sectors (except for 2010 through 2012 where a higher percent of the sector's initial allocation was utilized).

---

<sup>14</sup> Source: ADFG Fish Tickets, data compiled by AFKIN in Comprehensive\_FT small\_boat\_div (2-8-22). Due to data confidentiality restrictions, the analysis does not display quantitative diversification data for the BSAI Pacific cod jig sector.

**Table 3-13 Count of vessels in the BSAI Pacific cod jig sector, initial allocation (mt), final allocation (mt), and reallocation amounts (mt) to other BSAI Pacific cod sectors from 2008 through 2021**

Year	Vessel count	Initial allocation (mt)	Final allocation (mt)	Reallocations (mt)	Final allocation as a % of initial allocation
2008	15	2,134	180	-2,104	8%
2009	3	2,207	25	-2,182	1%
2010	7	2,110	350	-1,760	17%
2011	11	2,850	510	-2,340	18%
2012	4	3,263	463	-2,800	14%
2013	6	3,251	51	-3,200	2%
2014	2	3,174	101	-3,073	3%
2015	4	3,118	100	-3,018	3%
2016	2	3,144	94	-3,050	3%
2017	1	2,993	13	-2,980	0%
2018	1	2,549	149	-2,400	6%
2019	2	2,259	159	-2,100	7%
2020	3	1,945	18	-1,927	1%
2021	0	1,565	65	-1,500	4%

Source: NOAA Fisheries Alaska Region, [BSAI Pacific cod reallocations \(1995–present\)](https://media.fisheries.noaa.gov/dam-migration/bsai-pcod-reallocation-1995-present.pdf) report at <https://media.fisheries.noaa.gov/dam-migration/bsai-pcod-reallocation-1995-present.pdf>  
NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive\_BLEND\_CA; sector\_landings\_tgt(11-19-21)

**Table 3-14 BSAI Pacific cod jig sector ex-vessel price (\$), BSAI Pacific cod gross ex-vessel revenue (millions \$), BSAI Pacific cod gross first wholesale value (millions \$) from 2008 through 2020**

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Ex-vessel price (\$ per lbs.)	0.52	*	0.28	0.34	0.28	0.21	*	0.27	*	*	*	*	*
Gross ex-vessel revenue (\$)	202,302	*	209,779	375,083	51,706	6,752	*	16,691	*	*	*	*	*
Gross first wholesale value	373,203	*	501,447	847,728	135,494	20,526	*	38,902	*	*	*	*	*

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; sector\_landings\_rev(2-18-22)

### 3.7. Product Composition and Flow of Pacific Cod

The following section provides information on the production composition and flow of Pacific cod, and it largely draws from the 2019 Wholesale Market Profiles for Alaska Groundfish and Crab Fisheries (AFSC 2019) and the 2020 Economic Status of the Groundfish Fisheries of Alaska (NMFS 2022).

Pacific cod is a whitefish found in the coastal Pacific Ocean from Alaska to California with the largest concentrations found in the GOA and the Bering Sea. In 2017, Alaska's Pacific cod accounted for 18 percent of the total global cod harvest. Pacific cod are highly valued for their mild, white flesh and are primarily processed into fillet and head and gutted (H&G) products. Alaska's Pacific cod harvest is primarily processed as H&G and is largely purchased by China, Japan, and Europe for further processing including the production of salt cod. Other final cod products include fillet blocks, individually frozen fillets, or fish sticks which are either individually quick-frozen or processed into shatterpack – layered frozen fillets that separate individually when hit against a hard surface—or layer pack. There is a significant shore-based production of Alaska's Pacific cod fillets. Single-frozen Alaska cod fillets are a high-value product destined primarily for domestic markets. The final markets include upscale dining establishments, institutional food service, quick-service restaurants, retail fish markets, grocery stores, and overseas markets (AFSC 2019).

H&L or pot vessels that operate in the less than 60' H&L or pot CV sector do not process Pacific cod at-sea, instead delivering to floating or shore-based processors. Pacific cod caught by this sector is processed into fillets that are either shatterpack or individually quick frozen. In the past, vessels operating in this sector had access to fresh markets where product was packaged whole and fresh before being air freighted to Korea (H&L/pot fisherman, personal communication).

In 2017, Alaska processors produced 136,990 mt of Pacific cod products, valued at \$510.2 million. Production volume in 2017 was the lowest since 2010, which mirrors trends of declining TAC for both the GOA and BSAI. Despite lower volumes, 2017 production value rose to a 12-year high of \$510 million due to an exceptionally strong market. Price increases are generally understood to be the result of strong demand combined with a reduction in Pacific and Atlantic cod harvest volume, as well as a reduction in the haddock quota in the Barents Sea. In 2017, Alaska Pacific cod H&G product accounted for 72 percent of production volume (98,489 mt) in 2017, and 67 percent of first wholesale value (\$341 million). Fillets accounted for 12 percent by wholesale volume (16,538 mt) and 25 percent of first wholesale value (\$127 million). Other products (e.g., roe, milt, fish meal) collectively made-up 16 percent of wholesale volume with 21,963 mt valued at \$42.5 million (AFSC 2019).

The ex-vessel prices for H&G Pacific cod caught and processed by H&L and pot gear vessels have been consistently higher than the prices received by trawl vessels (NMFS 2022, 48). According to an industry representative, this price difference occurs because fish caught by H&L 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. An industry representative also confirmed that it is common for BSAI Pacific cod jig operations to bleed cod while still alive, resulting in a high-quality product.

## 4. Analysis of Impacts

### 4.1. Methods and Approach for Impact Analysis

The impact analysis in this document is designed to meet the requirements of E.O. 12866, which necessitates an RIR to evaluate the costs and benefits of the alternatives including both quantifiable and qualitative considerations. Additionally, the analysis should provide information for decision makers “to 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 analysis is supported by recent fisheries data, analyses, and reference documents with the goal of using the best scientific information available (National Standard 2) to inform the Council’s decision-making. Chapter 4 contains the analysis of economic and social impacts comparing the No Action Alternative 1 to the Action Alternative 2. Secondary data include detailed information on the dynamics of the BSAI Pacific cod fishery, market, and communities that are associated with the impacted sectors by way of harvesting or processing. In particular, the description of fisheries (Chapter 3) and the Analysis of Impacts (Chapter 4) draw from:

#### **Annual Community Engagement and Participation Overview (ACEPO) (Wise et al., 2021).**

ACEPO is an annual report that provides an overview of communities that are substantially involved with harvesting or processing groundfish or crab in Alaska. [https://www.npfmc.org/wp-content/PDFdocuments/Publications/ACEPO\\_ESSR\\_FY21.pdf](https://www.npfmc.org/wp-content/PDFdocuments/Publications/ACEPO_ESSR_FY21.pdf)

#### **Amendment 85 (72 FR 50788, September 2007; effective January 1, 2008).**

Amendment 85 created the existing sector allocations for non-Community Development Quota (CDQ) program BSAI Pacific cod. (In 2014 the BSAI Pacific cod stock was split into separate BS and AI stocks for the purposes of setting OFL and ABC, but sector allocations continue to be determined based on the summed total of BS and AI TACs, after deduction of 10.7% for CDQ allocation. Sector allocations may be fished in either the BS or AI, subject only to the sector’s overall harvest limit.) Amendment 85 also established NMFS’s ability to make in-season TAC reallocations (rollovers) between sectors.

#### **BSAI Pacific cod Allocation Review (NPFMC 2019).**

The BSAI Pacific cod allocation review analyzed the BSAI Pacific cod allocations established under Amendment 85 to ensure the optimal yield is being achieved under current conditions. The review can be found here: [https://www.npfmc.org/wp-content/PDFdocuments/catch\\_shares/Pcod/BSAIPcodAllocationReview2019.pdf](https://www.npfmc.org/wp-content/PDFdocuments/catch_shares/Pcod/BSAIPcodAllocationReview2019.pdf)

#### **Endangered Species Act Section 7 Biological Opinion: Authorization of the Alaska groundfish fisheries under the proposed revised Stellar Sea Lion Protection Measures (NMFS 2014).**

The Endangered Species Act Section 7 Consultation Biological Opinion considered the action proposed by NMFS Alaska Region Sustainable Fisheries Division (SFD) to modify the federal groundfish fisheries and State of Alaska parallel groundfish fisheries for Atka mackerel, Pacific cod, and pollock in the Aleutian Islands subarea. This consultation also considers proposed research to better understand the potential effects of these fisheries on Stellar sea lions and on the efficacy of conserving prey in areas closed to fishing. The Biological Opinion can be found here: <https://repository.library.noaa.gov/view/noaa/17196>

#### **Local Knowledge, Traditional Knowledge, and Subsistence Search Engine.**

When preparing this analysis, staff used the Local Knowledge, Traditional Knowledge, and Subsistence (LKTKS) search engine developed by the LKTKS Taskforce to look for action-specific sources of information containing LK and TK. The search engine contains scientific articles in peer-reviewed journals, white papers, archival references, and other sources of information related to LK, TK, the social science of LK and TK, and subsistence information. No results were returned specific to LK from the affected BSAI Pacific cod sectors or TK related to BSAI Pacific cod more broadly. Some results were returned for subsistence which provided important contextual information but the sources were not widely used in the analysis, because the areas of academic study were not relevant to the communities that are engaged in or dependent on the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors (see Section 4.5). Additionally, because the proposed action alternative (Alternative 2) would redefine two current commercial BSAI Pacific cod sectors, there are no anticipated direct or indirect impacts on the subsistence harvest, sharing or use of BSAI Pacific cod. The search engine can be found here:

[https://www.npfmc.org/lktkts\\_information/](https://www.npfmc.org/lktkts_information/)

### **Stock Assessment and Fishery Evaluation (SAFE) Report for the Groundfish Fisheries of the Gulf of Alaska and Bering Sea/Aleutian Islands Area: Economic Status of the Groundfish Fisheries off Alaska (NMFS 2020).**

The Economic SAFE report contains economic data and information about the Federal groundfish fisheries in the Gulf of Alaska and the BSAI. This report is published annually as an appendix to the Stock Assessment and Fishery Evaluation reports to provide data on catch, discards, prohibited species catch, ex-vessel and first-wholesale production and value. The 2020 Economic SAFE is available here:

<https://meetings.npfmc.org/CommentReview/DownloadFile?p=bc83c1f0-2cc5-49a4-850c-ee822082b6be.pdf&fileName=D7%20Groundfish%20Economic%20SAFE.pdf>

### **Wholesale Market Profiles for Alaska Groundfish and Crab Fisheries (AFSC 2019).**

This report evaluates a series of comprehensive wholesale market profiles for Federally managed groundfish and crab species caught in Alaska commercial fisheries. The report is available here:

<http://www.mcdowellgroup.net/wp-content/uploads/2020/09/wholesale-market-profiles-for-alaska-groundfish-and-crab-fisheries-noaa.pdf>.

For this analysis, the reference information, tables, and figures largely use quantitative harvest, harvesting vessel, value, and processor activity from 2008 through 2021. 2008 through 2021 is time period in which the current BSAI Pacific cod allocations under Amendment 85 have been implemented. These fishery data were obtained through the Alaska Fishery Information Network (AKFIN). AKFIN has access to a variety of data sources including the catch accounting system (CAS) data which is the best available estimate of total catch in the groundfish fisheries off Alaska. In 2003, NMFS changed the methodologies used to determine catch estimates from the NMFS blend database (1995 through 2002) to the CAS (2003 through present). Currently, the CAS relies on data derived from a mixture of production and observer/electronic monitoring reports as the basis of the total catch estimates.

AKFIN also has access to Commercial Fisheries Entry Commission (CFEC) Fish Ticket data, and Alaska Department of Fish and Game (ADFG) Commercial Operators Annual Report (COAR) data, from which AKFIN can supply catch and discard records, as well as estimates of gross ex-vessel and first wholesale revenues. eLandings, which houses Fish Ticket data, was implemented in 2009. Prior to 2009, paper Fish Tickets were used. Paper Fish Tickets did not obtain consistent reporting for the management program codes which is how AKFIN determines participation in Federal fisheries.

The analysis uses vessel LOA data reported to the CFEC because it is considered the most up to date data source for length. A vessel's length is typically modified when it changes ownership or when it needs modifications. It is important to note it is possible that the reported United States Coast Guard (USCG) Documented Length would be different for vessels operating in the less than 60' H&L or pot CV sector. However, the United States Coast Guard (USCG) does not measure vessels on an annual basis and in some instances may not have measured a vessel for an extended period (see Chapter 5 for further analysis on LOA considerations).

Effort was made to provide the most relevant fisheries data while adhering to confidentiality constraints. The BSAI Pacific cod jig sector has had a relatively low level of participation in recent years, and the majority of information for the jig sector (i.e., landings, revenue, port delivery, etc.) is confidential. Additionally, there are five unique H&L or pot CVs that are 56' LOA that have participated in the Federal BSAI Pacific cod fishery (2008-2021). On average, two vessels that are 56' LOA have participated in the BSAI Pacific cod less than 60' H&L or pot CV sector each year. For this reason, data are often aggregated so that H&L or pot CVs less than or equal to 56' (option 2) are analyzed in the new BSAI Pacific cod small vessel sector to provide the best available information for all H&L or pot CVs less than or equal to 56' within the bounds of confidentiality.

## 4.2. Alternative 1, Status Quo

Under Alternative 1, no action, the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors, their allocation, and the hierarchy of reallocations of BSAI Pacific cod among all sectors currently set in Federal regulations at §679.20(a)(7)(iii) would remain unchanged as described in Chapter 3 and the corresponding subsections of this RIR.

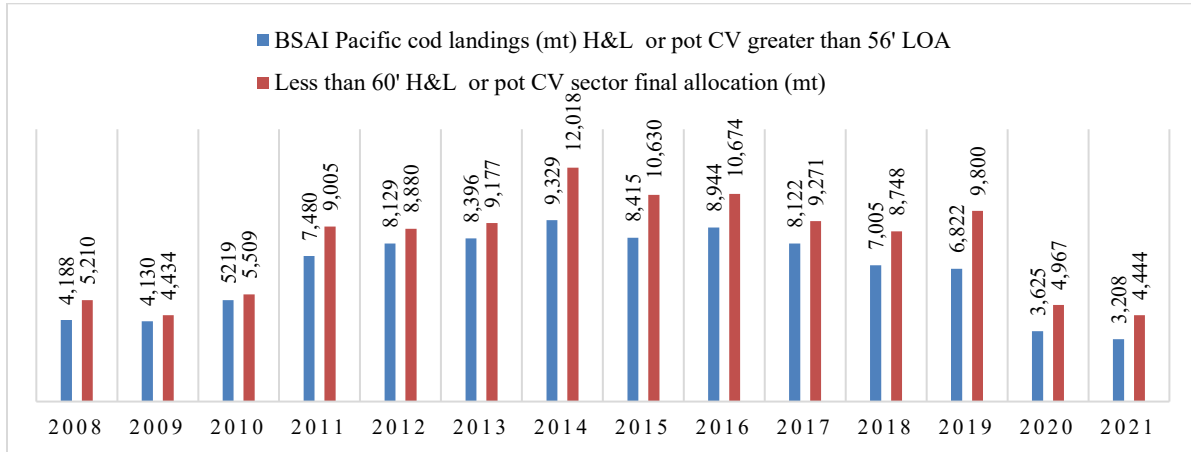
Figure 4-1 reports the Federal BSAI Pacific cod landings (mt) for H&L and pot CVs greater than 56' LOA compared to the less than 60' H&L or pot CV sector's final allocation (mt) from 2008 through 2021. The annual amount (mt) of Federal BSAI Pacific cod harvested by H&L or pot CVs greater than 56' LOA has ranged from a low of 3,208 mt in 2021 to a high of 9,329 mt in 2014. H&L or pot CVs greater than 56' LOA have harvested 83 percent of the sector's final allocation on average from 2008 through 2021. Smaller vessels operating in the less than 60' H&L or pot CV sector could be constrained by the larger H&L or pot CVs that have historically harvested the majority of the sector's final allocation. However, the most recent five years for which data are available (2017-2021) show H&L or pot CVs greater than 56' LOA have harvested 79 percent of the sector's final allocation on average. **As such, it does not appear that H&L or pot CVs greater than 56' are harvesting a larger portion of the sector's final allocation over time.**

Under the status quo, there are several factors likely contributing to a more competitive fishery for the less than 60' H&L or pot CV sector. As described in Chapter 3, the sector receives their entire allocation on January 1 each year because CVs less than 60' are not subject to the seasonal restrictions that apply to other vessels, and vessels that participate in the sector compete for their share of the allocated TAC on an annual basis. All BSAI Pacific cod sector's allocation of BSAI Pacific cod TAC fluctuates with abundance, and the amount of BSAI Pacific cod TAC that is available has declined every year since 2012, until 2022 (for reference, see Table 3-1). The less than 60' H&L or pot CV sector has routinely harvested their entire allocation of BSAI Pacific cod in addition to reallocations from other sectors including the BSAI Pacific cod jig, greater than or equal to 60' H&L, greater than or equal to 60' pot CV, and trawl sectors; although it is the jig sector that has consistently contributed reallocated Pacific cod. At the same time, fishing activity in the BSAI Pacific cod less 60' H&L or pot CV sector has increased and there has been a gradual shortening of this sector's season since 2008.

**Under Alternative 1, there are no anticipated impacts of the status quo on the BSAI Pacific cod jig sector or H&L and pot CVs greater than 56' LOA.** A potential impact of Alternative 1 for H&L or pot



CVs less than or equal to either 55’ or 56’ LOA is that they would continue to compete with larger vessels in their sector that have additional capacity and efficiencies. However, the overall declining BSAI Pacific cod TAC in recent years (except for 2022), increased fishing activity, and a relative shortening of the fishing season suggest the less than 60’ H&L or pot CV sector is becoming more competitive regardless of the vessel’s length.



**Figure 4-1 BSAI Pacific cod landings (mt) for H&L and pot CVs greater than 56’ LOA compared to the less than 60’ H&L or pot CV sector’s final allocation from 2008 through 2021**

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive\_BLEND\_CA; sector\_landings\_tgt(11-19-21)

### 4.3. Alternative 2, Redefine the Current BSAI Pacific Jig Sector

Alternative 2 would redefine the Federal BSAI Pacific cod jig and less than 60’ H&L or pot CV sectors. The BSAI Pacific cod jig sector would be redefined as the new BSAI Pacific cod small vessel sector which would include H&L or pot CVs less than or equal to either 55’ or 56’ LOA (option 1 and 2, respectively) and jig CVs and CPs. The current less than 60’ H&L or pot CV sector would be redefined to exclude H&L or pot CVs less than or equal to either 55’ or 56’ LOA.

Alternative 2 would allow the new BSAI Pacific cod small vessel sector to harvest BSAI Pacific cod from the jig sector’s 1.4 percent allocation. The redefined less than 60’ H&L or pot CV sector would harvest BSAI Pacific cod from the current less than 60’ H&L or pot CV sector’s 2 percent allocation. Eligibility for either sector – the new BSAI Pacific cod small vessel sector or the redefined less than 60’ H&L or pot CV sector– would be based on a vessel’s length and gear type, meaning a H&L or pot vessel could not opt into one sector or another. Alternative 2 does not impact the definition or allocation for any other BSAI Pacific cod sector.

Federally permitted H&L or pot CVs eligible for a new BSAI Pacific cod small vessel sector or the redefined less than 60’ H&L or pot CV sector would still be required to have a Federal LLP license under Alternative 2. Vessels in the less than 60’ H&L or pot sector need a non-trawl LLP to participate in the Federal fisheries (unless exempt), but they are exempt from the Pacific cod endorsement on their LLP, see § 679.4(k)(9)(iv)(B).

#### 4.3.1. Historical Participation

Since 2008, 33 unique vessels have participated in the BSAI Pacific cod jig sector. The jig sector has had a relatively low level of participation in the fishery in recent years: zero jig vessel participated in the Federal fishery in 2021, three vessels participated in 2020, and two vessels in 2019 (see Table 3-13

above). There is one jig vessel that has regularly participated (nine out of fourteen years from 2008 through 2021) in the Federal BSAI Pacific cod fishery and would be most impacted by Alternative 2.

Since 2008, 94 unique vessels have participated in the Federal BSAI Pacific cod less than 60' H&L or pot CV sector. Of these 94 vessels, 61 are greater than 56' LOA, five are equal to 56' LOA, and 28 are less than 55' LOA. However, the majority of vessels that participate in the less than 60' H&L or pot CV sector are 58' LOA as there are 57 unique vessels that are 58' LOA that have participated in this sector since 2008.

Redefining the less than 60' H&L or pot CV and jig sectors would impact the potential number of participants for both sectors. Table 4-1 uses historical data to depict the count of vessels that would have been in the new BSAI Pacific cod small vessel sector and the redefined less than 60' H&L or pot CV sector from 2008 through 2021 under option 1 and option 2, had these sectors existed. This shows the potential level of participation the Council and NMFS could expect in these sectors. Under option 1, the BSAI Pacific cod small vessel sector would have had an average of nine vessels (H&L, pot, and jig gear) participating from 2008 through 2021. The average number of vessels in the BSAI Pacific cod small vessel sector increases to 12 under option 2. The slight variation in participation between the options is because there are five vessels that are 56' LOA that have participated in the Federal BSAI Pacific cod fishery since 2008 and the average level of participation for this LOA is two vessels.

**Table 4-1 Count of vessels that would have been eligible for the new BSAI Pacific cod small vessel sector and the redefined less than 60' H&L or pot CV sector under option 1 and option 2 from 2008 through 2021**

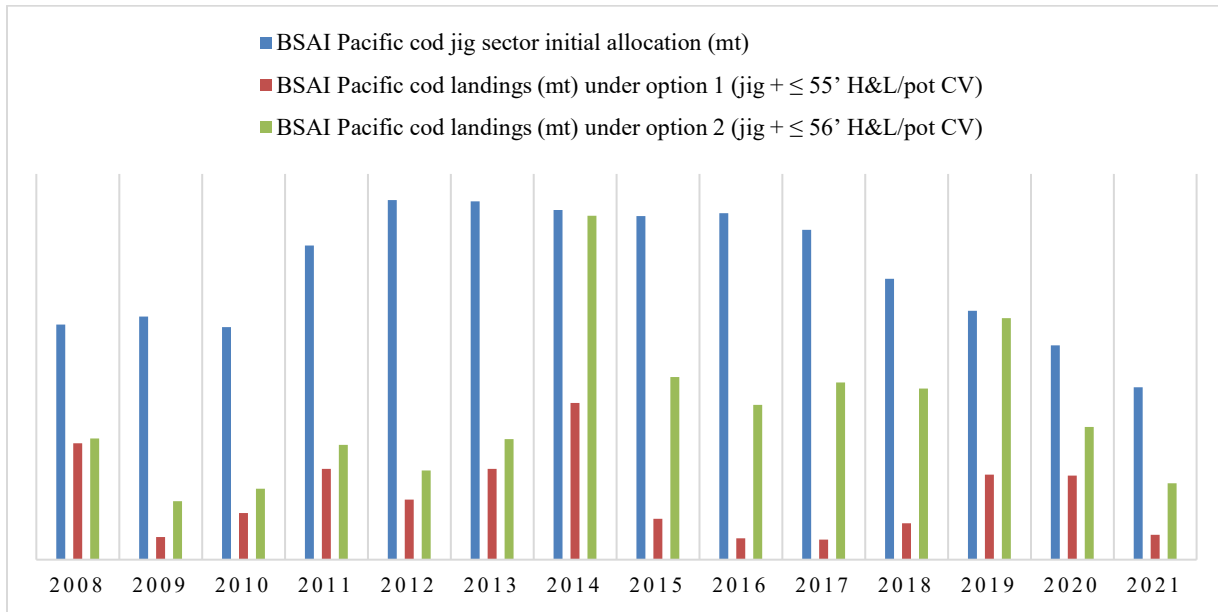
		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Annual Average Count
<b>Option 1</b>	<i>Small vessel sector (jig + ≤ 55' H&amp;L /pot CV)</i>	22	12	11	17	10	13	7	8	4	2	4	7	10	2	9
	<i>Redefined &lt;60' sector (≥56' H&amp;L /pot CV)</i>	21	19	19	16	18	20	16	21	20	22	26	31	34	24	22
<b>Option 2</b>	<i>Small vessel sector (jig + ≤ 56' H&amp;L/pot CV)</i>	24	15	13	18	11	15	9	11	7	5	7	11	13	5	12
	<i>Redefined &lt;60' sector (≥57' H&amp;L/pot CV)</i>	19	16	17	15	17	18	14	18	17	19	23	27	31	21	19

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive\_BLEND\_CA; sector\_landings\_tgt(11-19-21)

### 4.3.2. Harvest Information

Figure 4-2 compares the BSAI Pacific cod jig sector’s initial allocation and the targeted landings of Federal BSAI Pacific cod of vessels (H&L, pot, and jig) that would be eligible for the new BSAI Pacific cod small vessel sector under option 1 and 2 (amounts are mt). Due to confidentiality restrictions the landings amount (mt) cannot be displayed. These historical catch accounting data show **there would have been enough TAC in the BSAI Pacific cod jig sector’s 1.4 percent allocation to support the new BSAI Pacific cod small vessel sector in every year from 2008 through 2021 under option 1 and 2.**

It is the Council’s intent that under Alternative 2 the new BSAI small vessel sector would have TAC apportioned on a trimester basis (Jan 1—Apr 30 (60%); Apr 30 –Aug 31 (20%), and Aug 31—Dec 31 (20%)).<sup>15</sup> It is not possible to quantitatively display the historical BSAI Pacific cod landings (mt) data for vessels that would be eligible for the new BSAI Pacific cod small vessel sector due to confidentiality restrictions. However, it is generally anticipated there would be enough BSAI Pacific cod apportioned in each trimester to support a new BSAI Pacific cod small vessel sector under option 1 and option 2. In the most recent five years for which data are available (2017-2021), there would have been enough BSAI Pacific cod apportioned in each trimester to support a new BSAI Pacific cod small vessel sector under option 1 and every trimester except for the 2019 C season under option 2.



**Figure 4-2 Comparison of BSAI Pacific cod jig sector initial allocation (mt) and the target landings (mt) of jig, H&L, and pot vessels that would be eligible for the new BSAI Pacific cod small vessel sector under option 1 and 2 from 2008 through 2021**

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive\_BLEND\_CA; sector\_landings\_tgt(11-19-21)

<sup>15</sup> Changing the jig sector’s seasonal allocation of BSAI Pacific cod TAC would require a Section 7 Consultation for Stellar sea lions because that management decision would change the way TAC is issued seasonally. Seasonal apportionments for BSAI Pacific cod fisheries were the result of the Steller sea lion mitigation measures that aim to keep important prey species from being harvested in a condensed time when females might need ready access to prey during pup rearing, since longer foraging trips would lead to less provisioning of pups on the rookeries. The jig sector is primarily a nearshore fishery that occur closer to the rookeries.

### 4.3.3. Reallocation Considerations

NMFS typically reallocates projected unused BSAI Pacific cod jig TAC to the less than 60' H&L or pot CV sector between January and March to ensure this sector does not experience a disruption of fishing between their initial allocation and the reallocation. NMFS tries to reallocate projected amounts of unharvested Pacific cod to sectors that may be able to harvest these amounts, but NMFS tries not to reallocate Pacific cod from a sector that may have the capacity to catch their allocation. To evaluate a sector's capacity, NMFS must first determine a sector's remaining Pacific cod allocation and whether the sector could harvest the remaining amount. Making these determinations about capacity requires communication with vessel operators and processors. If any vessel operator or processor indicates that they will remain active or become active in the fishery before the end of the season or the year, NMFS will likely be more conservative in leaving amounts of Pacific cod available for that sector.

Under Alternative 2, it is uncertain if or when NMFS would know whether any TAC would be available from the new BSAI Pacific cod small vessel sector to reallocate to the redefined less than 60' H&L or pot CV sector. Under Alternative 2, option 1 and 2, it is anticipated that smaller H&L or pot CVs eligible for the new BSAI Pacific cod small vessel sector would have an opportunity to harvest more Pacific cod in the A season and these vessels could fully utilize the jig sector's A season allowance. It is also possible that the new BSAI Pacific cod small vessel sector would not fully utilize the jig sector's A season allowance, but because smaller H&L or pot CVs could extend their fishing season early in the year, it would be uncertain when NMFS would be able to project whether any TAC would be available from the new BSAI Pacific cod small vessel sector to reallocate to the redefined less than 60' H&L or pot CV sector.

In a scenario where there was enough BSAI Pacific cod remaining in the new BSAI Pacific cod small vessel sector that could be reallocated to the redefined less than 60' H&L or pot CV sector, NMFS might not have enough information to confidently make that reallocation until March or April. There is no recent history where the less than 60' H&L or pot CV sector has been open continuously from January 1 – April 30. It is unclear whether the larger H&L or pot CVs in the redefined less than 60' H&L or pot CV sector would be available to fish BSAI Pacific cod at that time or if there would be enough BSAI Pacific cod to reallocate to allow for a re-opening. If there was only a small amount to reallocate, and the redefined less than 60' H&L or pot CV sector was already closed, it is possible that the fishery could not be re-opened even if vessels were available to participate due to the small amount of BSAI Pacific cod that would be available. However, if a small amount of Pacific cod was available to reallocate while the redefined less than 60' H&L or pot CV sector was still open, the small amount could rollover into the larger allocation and the sector could continue to fish.

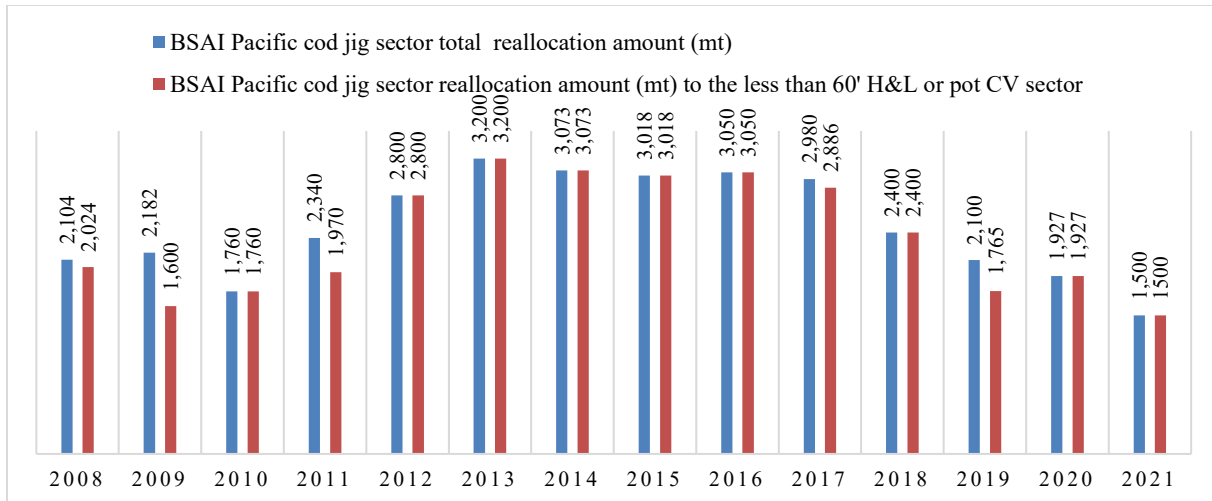
Under Alternative 2, the Council would need to consider whether an unused portion of a seasonal allowance in the new BSAI Pacific cod small vessel sector would be reallocated to the redefined less than 60' H&L or pot CV sector or whether it would rollover to the small vessel sector's next fishing season. The current regulations at 679.20(a)(7)(iv)(B) and (C) allow any unused portion of the seasonal allowance from any sector except the jig sector to be rolled over to that sector's next season during the current fishing year unless the Regional Administrator determines that sector would be unable to harvest its allocation. For the BSAI Pacific cod jig sector, the Regional Administrator will reallocate any projected unused portion of a seasonal allowance to the less than 60' H&L or pot vessel sector. Any unused C seasonal allowance of Pacific cod must be reallocated to the less than 60' H&L or pot CV sector on or near September 1. If the Council were to choose to rollover an unused portion of a seasonal allowance in the new BSAI Pacific cod small vessel sector, NMFS does not anticipate any issues with the unused portion of a seasonal allowance in the new BSAI Pacific cod small vessel sector being rolled over to the next fishing season. However, in a year where the new BSAI Pacific cod small vessel sector would not have the capacity to harvest the allocation, it is possible that the timing of a reallocation to the larger H&L

or pot vessels in the redefined less than 60' H&L or pot CV sector would not occur at a time when they would be able to fish it.

A significant portion of BSAI Pacific cod from the BSAI Pacific cod jig sector's initial allocation has historically been reallocated from the jig sector to the less than 60' H&L or pot CV sector on an annual basis. Figure 4-3 compares the total amount (mt) of BSAI Pacific cod that has been reallocated from the jig sector to all BSAI Pacific cod sectors and the amount (mt) that has historically been reallocated to the less than 60' H&L or pot CV sector (2008 through 2021). The amount of BSAI Pacific cod jig sector TAC that has historically been reallocated to the less than 60' H&L or pot CV sector has ranged from a low of 1,500 mt to 3,200 mt. In nine out of fourteen years, 100 percent of the BSAI Pacific cod jig sector's reallocation has been reallocated to the less than 60' H&L or pot CV sector. From 2008 through 2021, 95 percent of the BSAI Pacific cod jig's initial allocation that has been reallocated to the less than 60' H&L or pot CV sector (on average).

Historically common patterns of annual reallocations from the BSAI Pacific cod jig sector to the less than 60' H&L or pot CV sector, which has occurred every year since 2008, are likely to be impacted under Alternative 2. This would represent a change in historical patterns of use between sectors as seen over the 2008-2021 period, which could result in some inefficiencies as more BSAI Pacific cod is harvested by smaller H&L or pot CVs relative to the more efficient larger H&L or pot vessels. While there would be fewer vessels participating in the redefined less than 60' H&L or pot CV sector under Alternative 2, because vessels less than or equal to either 55' or 56' LOA would be excluded, the relative contribution of the jig sector's reallocation (mt) is greater than the landings (mt) of the smaller H&L or pot CVs in all but one year (2019) from 2008 through 2021 (see Table 4-2). Larger H&L or pot CVs that remain in the less than 60' H&L or pot CV sector could fish at a faster pace as there would be less BSAI Pacific cod TAC available early in the year when these vessels target BSAI Pacific cod in the Federal fishery. This could have cumulative effects on these vessel's safety, and it is more challenging for NMFS to conservatively manage a fishery with smaller quotas and fished at a faster pace.

**Therefore, under Alternative 2, there are potential incidental allocative effects that would impact H&L or pot CVs that would remain in the redefined less than 60' H&L or pot CV sector under option 1 and option 2.** These incidental allocative effects could occur under option 1 and option 2 and are more likely to occur under option 2 because 56' H&L or pot CVs would be eligible for the new BSAI Pacific cod small vessel sector. These effects could occur: a) if a new BSAI Pacific cod small vessel sector harvests the entire 1.4 percent allocation, a scenario that is more likely to occur under option 2; b) a scenario where the new BSAI Pacific cod small vessel sector does not harvest all of its initial allocation but there is either too little TAC to reallocate to the redefined less than 60' H&L or pot CV sector or the reallocation would occur at a time in the year when vessels are not able to fish; c) the overall BSAI Pacific cod biomass declines resulting in a reduction of the available BSAI Pacific cod TAC (a scenario which would impact all Amendment 85 sectors); d) more vessels participate in either the new BSAI Pacific cod small vessel sector or the redefined less than 60' H&L or pot CV sector over time.



**Figure 4-3 Comparison of the BSAI Pacific cod jig sector's total reallocation amount (mt) to all BSAI Pacific cod sectors and the reallocation amount (mt) to the less than 60' H&L or pot CV sector from 2008 through 2021**

Source: NOAA Fisheries Alaska Region, [BSAI Pacific cod reallocations \(1995–present\)](https://media.fisheries.noaa.gov/dam-migration/bsai-pcod-reallocation-1995-present.pdf) report at <https://media.fisheries.noaa.gov/dam-migration/bsai-pcod-reallocation-1995-present.pdf>

**Table 4-2 Comparison of BSAI Pacific cod less than 60' H&L or pot CV sector final allocation (mt), the target landings (mt) of BSAI Pacific cod by H&L or pot CVs less than or equal to 56' LOA, and the jig sector's reallocation amount (mt) from 2008 through 2021**

Year	BSAI Pacific cod <60' H&L/pot CV sector final allocation (mt)	≤56' H&L/ pot CV BSAI Pacific cod landings (mt)	BSAI Pacific cod jig reallocation (mt) to <60' H&L/pot CV sector
2008	5,210	926	2,024
2009	4,434	519	1,600
2010	5,509	299	1,760
2011	9,005	546	1,970
2012	8,880	748	2,800
2013	9,177	1,083	3,200
2014	12,018	3,119	3,073
2015	10,630	1,629	3,018
2016	10,674	1,357	3,050
2017	9,271	1,828	2,886
2018	8,748	1,553	2,400
2019	9,800	2,049	1,765
2020	4,967	1,193	1,927
2021	4,444	692	1,500

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT

#### 4.3.4. Diversification and Revenue Information

There is uncertainty about the magnitude of the incidental allocative effects that could occur under Alternative 2. To provide more clarity about the fishing activities of the H&L or pot CVs that could be impacted under Alternative 2, the following sections provide revenue diversification data for H&L or pot CVs greater than 56', as well as an estimate of the potential revenue impacts for H&L or pot CVs greater than 56' LOA and for H&L or pot CVs less than or equal to 56' LOA. Due to data confidentiality restrictions, the analysis groups all H&L or pot CVs less than or equal to 56' LOA (i.e., option 1 and 2) together.

##### 4.3.4.1. H&L or pot CVs Greater Than 56' LOA

Table 4-3 reports revenue diversification data for the larger H&L or pot CVs that would remain in the redefined less than 60' H&L or pot CV sector. From 2008 through 2020, H&L or pot CV's greater than 56' LOA total gross ex-vessel revenue for all fisheries has ranged from a low of \$17.57 million in 2009 to a high of \$33.49 million in 2019. The annual average total gross ex-vessel revenue from all fisheries for H&L or pot CVs greater than 56' LOA is \$26.61 million. The gross ex-vessel revenue for Federal BSAI Pacific cod for H&L or pot CVs greater than 56' LOA has ranged from a low of \$2.95 million in 2009 to a high of \$6.93 million in 2012. The annual average gross ex-vessel revenue from Federal BSAI Pacific cod for these vessels is \$5.63 million during the same time period. On average, the IFQ fisheries have contributed the largest portion of total gross ex-vessel revenue for H&L or pot CVs greater than 56' LOA at 29 percent, followed by the Federal BSAI Pacific cod and GHL fisheries (21 and 20 percent, respectively). At the vessel level, Federal BSAI Pacific cod has accounted for 50 percent or more of the total gross ex-vessel revenue for 19 of these vessels, and for 90 percent or more of the total gross ex-vessel revenue for six of these vessels (on average). Other fishing activities by H&L or pot CVs greater than 56' include salmon, CDQ, and the GOA Pacific cod, which in recent years has diminished significantly due to the decline in the GOA Pacific cod biomass and the resulting limitations on the GOA Pacific cod directed fishing.

Table 4-4 provides data on the gross ex-vessel revenue H&L or pot CVs greater than 56' have earned from the Federal BSAI Pacific cod fishery in the less than 60' H&L or pot CV sector, and an estimate of the revenue these vessels received from the BSAI Pacific cod jig sector's reallocation to the less than 60' H&L or pot CV sector. An important caveat to this data is that NMFS cannot track the landings that are derived from a sector's initial allocation or subsequent reallocations. Therefore, it is not possible to precisely estimate the potential revenue impact for H&L or pot CVs greater than 56' or the potential revenue opportunity for H&L or pot CVs less than or equal to 56' under Alternative 2.

In a scenario described above where NMFS could not maintain the historically common patterns of reallocations from the BSAI Pacific cod jig sector to the less than 60' H&L or pot CV sector, the incidental allocative effects would negatively impact H&L or pot CVs greater than 56' that remain in the redefined less than 60' H&L or pot CV sector. Annual jig reallocations to the less than 60' H&L or pot CV sector have ranged from 1,600 mt to 3,200 mt, accounting for an average of 30 percent of the sector's final allocation (2008-2020). The maximum estimated revenue impact for H&L or pot CVs greater than 56' LOA assumes the amount of BSAI Pacific cod reallocated from the jig sector to the less than 60' H&L or pot CV sector has been fully utilized in every year, and that it has been fully utilized by H&L or pot CVs greater than 56' LOA. This approach provides the upper bound of the potential revenue impact for these vessels. Based on these assumptions, the maximum estimated revenue derived from the BSAI Pacific cod jig sector's reallocation for H&L or pot CVs greater than 56' ranges from \$1.06 million to \$2.58 million (2020 real \$). The estimated maximum annual average gross ex-vessel revenue impact for H&L or pot CVs greater than 56' LOA is \$1.66 million.



This is likely an over-estimate because H&L or pot CVs greater than 56' LOA do not utilize 100 percent of the less than 60' H&L or pot CV sector's final allocation. From 2008 through 2020, H&L or pot CVs greater than 56' LOA have utilized approximately 85 percent of their sector's final allocation (on average). When accounting for the portion of the less than 60' H&L or pot CV's allocation that is harvested by vessels greater than 56' LOA, the estimated annual average gross ex-vessel revenue impact for these vessels is \$1.41 million. However, these impacts are expected to be partially mitigated by the ability of H&L or pot CVs greater than 56' LOA to fully utilize the current less than 60' H&L or pot CV sector's 2 percent allocation without competition from smaller vessels that would be excluded from the redefined less than 60' H&L or pot CV sector. When the BSAI Pacific cod landings (mt) from H&L or pot CVs less than or equal to 56' LOA and the associated gross ex-vessel revenue are also considered, **the estimated annual average gross ex-vessel revenue impact for H&L or pot CVs greater than 56' LOA is a decrease of \$1.26 million, which is 22 percent of these vessel's annual average total gross ex-vessel revenue for Federal BSAI Pacific cod (on average).** It does not appear H&L or pot CVs greater than 56' would be able to easily compensate for the anticipated loss of historically common reallocations of BSAI Pacific cod from the jig sector.

#### 4.3.4.2. H&L or pot CVs Less Than or Equal to 56' LOA

From 2008 through 2020, the total gross ex-vessel revenue for all fisheries for H&L or pot CVs less than or equal to 56' LOA has ranged from \$2.67 million in 2013 to \$8.16 million in 2019. The IFQ fishery contributed the largest source of gross ex-vessel revenue for H&L or pot CVs less than or equal to 56', ranging from approximately \$596,502 in 2008 to \$5.15 million in 2011. On average, the IFQ fishery has accounted for approximately 52 percent of the total gross ex-vessel revenue for H&L or pot CVs less than or equal to 56' LOA from 2008 through 2020, followed by the Federal BSAI Pacific cod and GHF fisheries at 22 and 16 percent, respectively. At the vessel level, Federal BSAI Pacific cod accounts for 50 percent of the total gross ex-vessel revenue for five H&L or pot CVs less than or equal to 56' LOA and there is one 56' vessel that depends on the Federal BSAI Pacific cod fishery for the majority of its gross ex-vessel revenue during the same time period. Other primary fishing activities by these smaller H&L or pot CVs include salmon, CDQ, and the GOA Pacific cod, although these fisheries have contributed, on average, 2 to 3 percent of these vessel's total gross ex-vessel revenues since 2008.

Table 4-5 provides data on the BSAI Pacific cod jig sector's initial allocation (mt), H&L or pot CVs less than or equal to 56' BSAI Pacific cod landings (mt), and the H&L or pot CVs less than or equal to 56' gross ex-vessel revenue from Federal BSAI Pacific cod from 2008 through 2020 to estimate the potential maximum additional revenue opportunity for H&L or pot CVs less than or equal to 56' LOA under Alternative 2. The estimated maximum additional revenue opportunity for H&L or pot CVs less than 56' LOA assumes these vessels could fully utilize the BSAI Pacific cod jig sector's 1.4 percent allocation. This approach provides the upper bound of the estimated potential revenue opportunity.

The BSAI Pacific cod jig sector's initial allocation has ranged from a low of 1,945 mt in 2020 to a high of 3,263 mt in 2012. The Federal BSAI Pacific cod landings of less than or equal to 56' H&L or pot CVs has ranged from a low of 299 mt in 2010 to a high of 3,119 mt in 2014. Based on the above assumption, the estimated maximum additional revenue opportunity for H&L or pot CVs less than or equal to 56' LOA under Alternative 2 ranges from \$38,455 to \$1.97 million (2020 real \$). The estimated maximum annual average additional revenue opportunity for H&L or pot CVs less than or equal to 56' LOA is \$1.87 million. A more accurate estimate considers historical levels of participation from BSAI Pacific cod jig sector vessels and their associated revenue from the fishery. While revenue information for jig vessels cannot be quantitatively displayed due to confidentiality restrictions, when the historical participation of BSAI Pacific cod jig sector vessels is accounted for, **the annual average additional revenue opportunity for H&L or pot CVs less than or equal to 56' LOA is \$1.08 million under Alternative 2.**

However, there is uncertainty about the actual annual additional revenue opportunity for smaller H&L or pot CVs that would be eligible for the new BSAI Pacific cod small vessel sector. It is uncertain whether H&L or pot CVs less than or equal to 56' and jig vessels have the capacity to fully utilize the BSAI Pacific cod jig sector's initial allocation in the new BSAI Pacific cod small vessel sector (see Figure 4-2). Because there is no history of smaller H&L or pot CVs fishing behavior in a new BSAI Pacific cod sector, staff cannot accurately predict fishing effort. Additionally, the Council is considering a suboption (analyzed in Section 4.3.6 below) that would reserve BSAI Pacific cod TAC apportioned in the new BSAI Pacific cod small vessel sector's B season for harvest by jig vessels only. The B season allowance would be 20 percent of the sector's initial allocation. Historical participation in the BSAI Pacific cod jig sector has varied, and it is not possible to accurately predict what the future effort of jig vessels would be in the B season. Finally, under Alternative 2, the Council would need to consider whether unused BSAI Pacific cod TAC in the new small vessel sector would be reallocated to the redefined less than 60' H&L or pot CV sector or whether unused TAC would be rolled over to the next fishing season. If the Council were to choose not to rollover unused BSAI Pacific cod TAC in the new small vessel sector to the next fishing season, that would impact the potential revenue opportunity for smaller H&L or pot CVs.

#### 4.3.4.3. DHS State-waters Pot Fishery

The DHS pot fishery opens seven days after the Federal BSAI Pacific cod less than 60' HAL or pot CV sector closes and is open to vessels less than or equal to 58' LOA using pot gear with a limit of 60 pots per vessel. Under Alternative 2 (option 1 and option 2), the BOF would need to address the trigger for opening the DHS pot fishery because the less than 60' H&L or pot CV sector would be redefined and no longer exist as it currently does in Federal regulations under Alternative 2. The BOF, with industry input, would also need to determine what the new trigger should be – the new BSAI Pacific cod small vessel sector closing date, the redefined less than 60' H&L or pot CV sector closing date, or some other trigger such as a hard start date. If the BOF chose to select one of the newly defined sectors' closure date as the trigger, vessels that operate in that trigger sector would be able to choose to fish in the Federal BSAI Pacific cod fishery until it closed and then fish in the DHS pot fishery once it opened. **However, vessels that do not operate in the trigger sector would likely need to decide whether they want to participate in Federal or State waters if both were open at the same time.** Alternative 2 would not impact the DHS State waters jig fishery because the fishery opens with a hard date of May 1.

The BOF, with industry input, set regulations to open the DHS pot fishery seven days after the Federal BSAI Pacific cod less than 60' H&L or pot CV sector closes because pot vessels would be available to fish in the DHS registration area. This management approach also provides pot vessels the opportunity to fully harvest the Federal BSAI Pacific cod fishery before starting the DHS pot fishery. The DHS fishery is a significant opportunity for pot vessels less than or equal to 58' LOA. From 2014 through 2021, an average of 15 pot CVs greater than 56' LOA and an average of three pot CVs less than or equal to 56' LOA have participated in the DHS fishery. The annual average gross ex-vessel revenue pot CVs greater than 56' earn from the DHS fishery is \$6.67 million, accounting for 24 percent of these vessel's total gross ex-vessel revenue across all fisheries (2014-2020). The annual average gross ex-vessel revenue pot CVs less than or equal to 56' earn from the DHS GHL fishery is \$1.21 million, accounting for 20 percent of their total gross ex-vessel revenue across all fisheries (2014-2020)<sup>16</sup>.

It is uncertain what action the BOF would take to open the DHS pot fishery. However, if the BOF selected the redefined less than 60' H&L or pot CV sector as the trigger to open the DHS fishery, pot vessels operating in the new BSAI Pacific cod small vessel sector could fish in the Federal fishery until the DHS GHL fishery opened and then register to participate in the State-waters DHS fishery. This could potentially leave an uncertain amount of Federal BSAI Pacific cod under-utilized in the A season by the

---

<sup>16</sup> Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; Small\_boat\_SMPC\_breakout(4-11-22)

new small vessel sector. Conversely, if the BOF selected the new BSAI Pacific cod small vessel sector as the trigger to open the DHS fishery, it is possible the GHL fishery would open later, and the larger pot vessels may not be available to fish the DHS pot fishery as smaller H&L or pot CVs in the new BSAI Pacific cod small vessel sector would have an opportunity to extend their fishing within jig sector's A season. Table 4-6 reports the Federal BSAI Pacific cod less than 60' H&L or pot CV sector and DHS pot fishery season dates from 2014 through 2021 to provide a snapshot of the timing of these fisheries.

**Table 4-3 Vessel count, gross ex-vessel revenue (\$), and percent of gross ex-vessel revenue (\$) by fishery from 2008 through 2020 for H&L or pot CVs greater than 56' LOA**

Year	BSAI Pacific cod			GHL Pacific cod			GOA Pacific cod			IFQ fisheries			Salmon			CDQ			Total value (\$)
	Vessel count	Gross ex-vessel value (\$)	% of total	Vessel count	Gross ex-vessel value (\$)	% of total	Vessel count	Gross ex-vessel value (\$)	% of total	Vessel count	Gross ex-vessel value (\$)	% of total	Vessel count	Gross ex-vessel value (\$)	% of total	Vessel count	Gross ex-vessel value (\$)	% of total	
2008	18	6,652,103	25%	13	1,598,941	6%	16	3,041,654	11%	12	3,644,207	14%	2	*	*	-	-	-	26,791,656
2009	16	2,951,989	17%	8	*	*	10	1,948,069	11%	11	7,203,094	41%	7	3,651,725	21%	1	*	*	17,569,699
2010	16	3,955,016	17%	8	*	*	11	2,601,820	11%	12	11,169,561	48%	7	2,733,884	12%	2	*	*	23,392,164
2011	15	6,338,559	21%	7	*	*	8	3,932,847	13%	10	13,799,181	46%	7	1,778,063	6%	2	*	*	30,295,572
2012	16	6,928,330	25%	12	3,198,012	11%	8	2,403,238	9%	10	9,231,334	33%	6	*	*	6	*	*	28,269,447
2013	18	5,821,985	22%	12	2,643,318	10%	8	1,468,727	5%	12	7,533,364	28%	8	5,042,784	19%	4	4,234,619	11%	26,724,236
2014	14	6,285,723	28%	12	5,749,381	25%	3	*	*	8	5,340,776	24%	6	1,464,020	6%	4	*	*	22,622,962
2015	18	5,482,695	23%	16	5,631,474	24%	9	1,103,953	5%	8	6,096,401	26%	10	2,664,981	11%	4	1,715,421	6%	23,622,694
2016	17	6,153,445	25%	17	8,292,268	33%	7	1,195,910	5%	8	5,618,679	22%	8	1,639,997	7%	5	1,475,928	7%	25,035,079
2017	19	5,796,555	22%	18	8,240,006	31%	7	928,049	3%	10	6,997,985	26%	7	2,494,797	9%	5	1,661,174	7%	26,872,592
2018	23	6,844,833	22%	22	12,091,330	38%	6	393,217	1%	10	7,610,074	24%	8	1,824,899	6%	4	1,986,501	6%	31,453,035
2019	27	6,588,011	20%	25	11,443,296	34%	3	*	*	12	7,360,138	22%	12	4,119,508	12%	4	*	*	33,490,524
2020	31	3,415,791	12%	30	11,052,170	37%	7	14,880	0%	20	7,584,741	26%	11	1,500,632	5%	3	2,511,254	8%	29,481,311

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; Small\_boat\_div (2-8-22)

**Table 4-4 Estimated range of potential gross ex-vessel revenue impacts for H&L or pot CVs greater than 56' LOA under Alternative 2 from 2008 through 2020, (real 2020 \$)**

Year	<60' H&L/ pot CV sector final allocation (mt)	<60' H&L/ pot CV landings (mt)	>56' H&L/ pot CV landings (mt)	≤56' H&L/ pot CV landings (mt)	BSAI Pacific cod jig re- allocation (mt)	>56' H&L/ pot CV landings as a % of total	≤56' H&L/ pot CV landings as a % of total	Jig re- allocation as a % of <60' H&L/ pot CV sector final allocation	<60' H&L/ pot CV sector BSAI Pacific cod gross ex- vessel revenue (\$)	>56' H&L/pot CV BSAI Pacific cod gross ex vessel revenue (\$)	≤56' H&L or pot CV BSAI Pacific cod gross ex- vessel revenue (\$)	Maximum estimated revenue impact for >56' H&L/ pot CV based on full utilization of jig reallocation (\$)	Estimated revenue impact for >56' H&L/pot CV based on proportionate utilization of jig reallocation (\$)	Adjusted estimated revenue impact for >56' H&L/ pot CV based on proportionate utilization of jig reallocation and excluding ≤56' H&L/pot CVs (\$)
<b>2008</b>	5,210	5,144	4,188	926	2,024	82%	18%	39%	8,165,746	6,652,103	1,513,643	2,584,233	2,116,302	1,948,699
<b>2009</b>	4,434	4,649	4,130	519	1,600	89%	11%	36%	3,344,577	2,951,989	392,588	1,065,219	946,302	918,289
<b>2010</b>	5,509	5,518	5,219	299	1,760	95%	5%	32%	4,193,203	3,955,016	238,187	1,263,537	1,195,071	1,186,288
<b>2011</b>	9,005	8,026	7,480	546	1,970	93%	7%	22%	6,807,924	6,338,559	469,366	1,386,669	1,292,336	1,267,391
<b>2012</b>	8,880	8,877	8,129	748	2,800	92%	8%	32%	7,604,752	6,928,330	676,422	2,184,608	2,000,528	1,961,502
<b>2013</b>	9,177	9,479	8,396	1,083	3,200	89%	11%	35%	6,582,389	5,821,985	760,404	2,030,113	1,798,168	1,741,584
<b>2014</b>	12,018	12,448	9,329	3,119	3,073	75%	25%	26%	8,466,496	6,285,723	2,180,773	1,607,258	1,204,540	797,840
<b>2015</b>	10,630	10,043	8,415	1,629	3,018	84%	16%	28%	6,592,653	5,482,695	1,109,959	1,556,610	1,304,280	1,175,357
<b>2016</b>	10,674	10,301	8,944	1,357	3,050	87%	13%	29%	7,081,239	6,153,445	927,793	1,758,291	1,526,664	1,439,365
<b>2017</b>	9,271	9,950	8,122	1,828	2,886	82%	18%	31%	7,115,258	5,796,555	1,318,703	1,804,428	1,472,922	1,306,068
<b>2018</b>	8,748	8,558	7,005	1,553	2,400	82%	18%	27%	8,325,620	6,844,833	1,480,787	1,877,869	1,537,097	1,342,103
<b>2019</b>	9,800	8,872	6,822	2,049	1,765	77%	23%	18%	8,656,204	6,588,011	2,068,193	1,186,514	912,353	520,728
<b>2020</b>	4,967	4,817	3,625	1,193	1,927	75%	25%	39%	4,502,222	3,415,791	1,086,431	1,325,192	997,264	832,582
<b>Total</b>	108,323	106,652	89,804	16,849	31,473	-	-	-	87,438,285	73,215,036	14,223,249	21,630,547	18,303,826	16,437,797
<b>Av.</b>	8,333	8,204	6,908	1,296	2,421	85%	15%	30%	6,726,021	5,631,925	1,094,096	1,663,888	1,407,987	<b>1,264,446</b>

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; Small\_boat\_div(2-8-22)

**Table 4-5 Estimated maximum potential revenue opportunity for H&L or pot CVs less than or equal to 56' LOA under Alternative 2 from 2008 through 2020, (real 2020 \$)**

Year	BSAI Pacific cod jig sector initial allocation (mt)	≤56' H&L/pot CVs Federal BSAI Pacific cod landings (mt)	≤56' H&L/pot CVs BSAI Pacific cod landings (mt) as a % of the jig sector initial allocation	≤56' H&L/ pot CVs BSAI Pacific cod gross ex-vessel revenue (\$)	Estimated maximum potential revenue opportunity for ≤56' H&L/ pot CVs (\$)	Estimated total revenue for ≤56' H&L/ pot CVs (\$)
2008	2,134	926	43%	1,513,643	1,974,600	3,488,242
2009	2,207	519	24%	392,588	1,276,853	1,669,440
2010	2,110	299	14%	238,187	1,442,658	1,680,844
2011	2,850	546	19%	469,367	1,980,617	2,449,982
2012	3,263	748	23%	676,422	2,274,333	2,950,755
2013	3,251	1,083	33%	760,404	1,522,212	2,282,616
2014	3,174	3,119	98%	2,180,773	38,455	2,219,228
2015	3,118	1,629	52%	1,109,959	1,014,566	2,124,524
2016	3,144	1,357	43%	927,793	1,221,788	2,149,581
2017	2,993	1,828	61%	1,318,703	840,421	2,159,124
2018	2,549	1,553	61%	1,480,787	949,686	2,430,472
2019	2,259	2,049	91%	2,068,193	211,967	2,280,160
2020	1,945	1,193	61%	1,086,431	684,825	1,771,256
Total	34,997	16,849	-	14,223,250	15,432,982	29,656,225
Average	2,692	1,296	48%	1,094,096	<b>1,187,152</b>	2,281,248

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; Small\_boat\_div(2-8-22)

**Table 4-6 Federal BSAI Pacific cod less than 60' H&L or pot CV sector and DHS Pacific cod pot fishery season dates from 2014 through 2021**

<b>Year</b>	<b>&lt;60' H&amp;L/pot CV sector open</b>	<b>&lt;60' H&amp;L/pot CV sector closed</b>	<b>DHS GHL pot fishery open</b>	<b>DHS GHL pot fishery closed</b>
<b>2014</b>	January 1	February 4	February 11	September 1
<b>2015</b>	January 1	February 2	February 9	March 31
<b>2016</b>	January 1	February 5	February 12	April 22
<b>2017</b>	January 1	February 2	February 9	April 8
<b>2018</b>	January 1	January 23	January 30	March 1
<b>2019</b>	January 1	January 12	January 19	February 24
<b>2020</b>	January 1	January 19	January 26	March 12
<b>2021</b>	January 1	January 26	February 2	March 25

Source: ADF&G; DHS Season Dates\_NPFMCpaper\_4.11.22 and SeasonDatesIBs\_cod\_pollock\_TLAS\_PSC

#### 4.3.5. Additional Fishing Opportunities for H&L or pot CVs

The Council is considering this action to provide additional opportunities for current fishery participants and potential new entrants with H&L or pot CVs less than or equal to either 55' or 56' LOA without negatively impacting vessels that currently operate in the BSAI Pacific cod jig sector. Overall, it is uncertain whether Alternative 2 would provide additional opportunities to H&L or pot CVs that would be eligible for the new BSAI Pacific cod small vessel sector under option 1 or option 2.

Figure 4-2 above compares the BSAI Pacific cod jig sector's initial allocation to the BSAI Pacific cod landings of the new BSAI Pacific cod small vessel sector under option 1 and option 2 (2008 through 2021). These catch accounting data show the BSAI Pacific cod jig sector's 1.4 percent allocation would have had enough TAC to support a new small vessel sector in every year from 2008 through 2021 under option 1 and 2. This suggests a new BSAI Pacific cod small vessel sector could provide additional fishing opportunities for H&L or pot CVs as it is anticipated there would be enough TAC available to support their historical level of BSAI Pacific cod harvest. However, it is important to note that the number of participating vessels could increase over time, and it is uncertain what the future fishing effort of smaller H&L or pot CVs would be in the new BSAI Pacific cod small vessel sector absent the competition of larger vessels with additional efficiencies.

Under option 1, there are five vessels 56' LOA and have historically participated in the less than 60' H&L or pot CV sector that would be in the redefined less than 60' H&L or pot CV sector. Excluding H&L or pot CVs less than or equal to 55' from the redefined less than 60' H&L or pot CV sector could create an opportunity for 56' vessels to harvest more of the 2 percent cod BSAI Pacific cod allocation. However, these 56' vessels do not have the same efficiencies as larger vessels typically 58' LOA and could be at a disadvantage compared to the larger vessels in the redefined less than 60' H&L or pot CV sector.

Small H&L vessels eligible for the new BSAI Pacific cod small vessel sector could see additional fishing opportunities under Alternative 2, option 1 and option 2. In a scenario where the GHF pot fishery in the DHS and the new BSAI Pacific cod small vessel sector were to be open concurrently, smaller H&L vessels would have the opportunity to continue fishing in the Federal fishery early in the year while small pot vessels could continue fishing in the redefined small vessel sector in Federal waters or switch over to the pot fishery in the DHS.

Alternative 2, option 1 and option 2, could adversely impact current fishery participants with H&L or pot CVs greater than 56' LOA. The historically common pattern of annual reallocations from the BSAI Pacific cod jig sector to the less than 60' H&L or pot CV sector, which has occurred in every year since 2008, would likely change under Alternative 2, option 1 and option 2. Any reduction in the over BSAI Pacific cod TAC that is available to H&L or pot CVs greater than 56' LOA could reduce the fishing opportunity for current participants and could potentially disincentivize future entrants with larger vessels from entering the fishery.

#### 4.3.6. Suboption – B Season as Jig Only Fishery

Under Alternative 2, the Council is considering a suboption for analysis that would reserve BSAI Pacific cod TAC apportioned in the B season for the new BSAI Pacific cod small vessel sector for jig CVs and CPs only. Vessels participating in the BSAI Pacific cod jig sector primarily fish between April and September when the weather is safest for smaller vessels to operate. The deliveries of vessels operating in the less than 60' H&L or pot CV sector, regardless of their size, are concentrated in January and the fall (September to December), which is also when these fisheries have been open.

Table 4-7 reports the count of BSAI Pacific cod deliveries, the average number of deliveries, and the percent of total deliveries made in the jig sector's seasons from 2008 through 2021 by vessels operating in



the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors. From 2008 through 2021, the BSAI Pacific cod jig sector made 430 deliveries of Federal BSAI Pacific cod, of which 373 (87 percent) occurred during the B season. From 2008 through 2021, the less than 60' H&L or pot CV sector made 3,993 deliveries of Federal BSAI Pacific cod, of which 2,618 (66 percent) occurred in the jig sector's A season. **If H&L or pot CVs eligible for the new BSAI Pacific cod small vessel sector under Alternative 2 were allowed to harvest BSAI Pacific cod during the B season, it is possible these vessels could constrain jig vessels**, particularly if there were to be an increase in the number of participating H&L or pot vessels over time or if there were to be less BSAI Pacific cod available for the new BSAI Pacific cod small vessel sector to harvest.

Three percent of the less than 60' H&L or pot CV sector's deliveries were made in the jig sector's B season from 2008 through 2021. Vessels operating in the less than 60' H&L or pot sector participate in salmon, IFQ, and other important fisheries during the jig sector's B season, and the sector has not been open during the jig B season since 2011. Some small H&L CVs have made landings in the jig sector's B season in State-waters inside 3 nm during the spring/summer months even though the Federal fishery for the less than 60' H&L or pot CV sector has closed. The State of Alaska does not differentiate between processing sectors (CPs and CVs) and the H&L CP sector in the BSAI is open year-round. That means a H&L CV of any size could participate in the parallel fishery after the Federal season closed. However, NMFS does not anticipate this fishing behavior to increase because of the Council's 2019 action that precluded Federal H&L, pot and trawl gear vessels from participating in the BSAI Pacific cod parallel fisheries unless they have an LLP license with the correct LLP endorsements and a designated FFP. This action also required Federally permitted or licensed vessels that fish in the parallel fishery to adhere to Federal sector and seasonal BSAI Pacific cod closures and would restrict those vessels from surrendering and later reapplying for the FFP within a specified time period.<sup>17</sup>

Because the less than 60' H&L or pot CV sector is typically closed by the time the jig sector's B season begins on April 30 and does not reopen until September 1 after the B season is closed, **there are no anticipated impacts of including the suboption which largely mirrors the historical fishing activity of both affected sectors.**

**Table 4-7 Count of BSAI Pacific cod deliveries, the average number of deliveries, and the percent of total deliveries made by vessels operating in the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors in each jig sector trimester from 2008 through 2021**

	Season	Count of deliveries	Average number of deliveries	% of total deliveries
<b>Jig</b>	A (Jan 1 - Apr 30)	14	1	3%
	B (Apr 30 – Aug 31)	373	27	87%
	C (Aug 31 - Dec 31)	43	3	10%
<b>&lt;60' H&amp;L /pot</b>	A (Jan 1 - Apr 30)	2,618	187	66%
	B (Apr 30 – Aug 31)	113	8	3%
	C (Aug 31 - Dec 31)	1,261	90	31%

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive\_BLEND\_CA; small\_boat\_monthlylandings (2-15-22)

<sup>17</sup> The Council action for parallel fisheries can be found at 85 FR 78038, Dec 3, 2020.

#### 4.4. Summary of Impacts on Fishing Activity

Table 4-8 provides a summary of expected impacts of this proposed action on fishing activity.

**Table 4-8 Summary of impacts on fishing activity**

Category	Option 1	Option 2 without suboption	Option 2 with suboption
<b>Fishing Location</b>	Not likely to change fishing location. This is outside of the scope of the action.		
<b>Timing and Effort</b>	Minimally modify timing for new vessels in redefined BSAI Pacific cod jig sector (Section 4.3.2 and 4.3.3). May also minimally modify effort for the redefined less than 60' H&L or pot CV sector because the reallocations are likely to change (Section 4.3.3).		No anticipated impacts, may closely mirror historical fishing activity of both sectors (Section 4.3.6).
<b>Authorized Gear Types</b>	No changes to authorized gear types. H&L, pot, and jig gear are authorized under the BSAI groundfish FMP. Additionally, Federal BSAI Pacific cod sectors are defined by gear type, operation type, and vessel size categories (Section 3.2 and 3.6).		
<b>Harvest Levels</b>	No changes to harvest levels or sector allocation structure. The BSAI Pacific cod TAC is set in accordance with the Pacific cod biomass (Section 3.2).		

#### 4.5. Community Impacts

The following sections characterize the communities that are engaged in or dependent on the BSAI Pacific cod less than 60' H&L or pot CV and jig sectors, and they largely rely on quantitative fishery information, within the bounds of confidentiality restrictions, that could be impacted by Alternative 2. This information helps to identify patterns of engagement in and dependency on the Federal BSAI Pacific cod fishery based on the distribution of vessels in the sectors most likely to be affected by Alternative 2 across communities. Given that Alternative 2 would impact two commercial BSAI Pacific cod sectors, there are no anticipated direct or indirect impacts on the subsistence harvest, sharing or use of BSAI Pacific cod (Reedy & Maschner 2014). As such, there are no stand-alone discussions of the BSAI Pacific cod subsistence fisheries provided in the fishing communities analysis.

##### 4.5.1. H&L or pot CVs Greater Than 56' LOA

Table 4-9 provides a count, by community of ownership address and year (2008-2020), of H&L or pot CVs greater than 56' LOA for all Alaska communities as well as Washington and other states (primarily Oregon and California) with any vessels active in the BSAI Pacific cod less than 60' H&L or pot CV sector during this time. There are 59 unique vessels greater than 56' LOA that have participated in the Federal BSAI Pacific cod less than 60' H&L or pot CV sector (2008 through 2020), of which 43 (73 percent) have a reported ownership address in an Alaska community. **Kodiak has the highest number of unique H&L or pot CVs greater than 56' LOA with a registered ownership address at 15 followed**

**by Homer at nine.** All communities across Kodiak Island<sup>18</sup> are engaged in commercial fisheries, but the majority of commercial vessels, including the less than 60' H&L or pot CV sector, and seafood processing plants are in Kodiak City. Commercial fishing, seafood processing, and commercial fishing support services are the major industries contributing to the local economy. Commercially significant groundfish species harvested in the Kodiak area include Pacific cod, sablefish, lingcod, skates, black rockfish, and pollock (Wise et al., 2021).

Table 4-10 reports the gross ex-vessel revenues for H&L or pot CVs greater than 56' from the Federal BSAI Pacific cod fishery by community of the vessel's historical ownership address (2008-2020, 2020 real \$). H&L or pot CVs greater than 56' LOA with a registered ownership address in an Alaska community generated approximately \$4.1 million in annual average gross ex-vessel revenue from the Federal BSAI Pacific cod fishery, which is approximately 21 percent of all gross ex-vessel revenues for those vessels in the same time period (Table 4-11).

During the same time period, the Homer/Kodiak/Anchor Point "community fleet" (all commercial fishing vessels with a registered ownership address participating in any area, gear, and species fisheries) annually averaged approximately \$222 million in gross ex-vessel revenue for all commercial fisheries, of which BSAI Pacific cod caught by H&L or pot CVs greater than 56' LOA accounted for approximately 1.2 percent (\$2.6 million) of the total combined revenue of the Homer/Kodiak/Anchor Point community fleet (Table 4-12).

---

<sup>18</sup> Kodiak Island has been inhabited for thousands of years by Alaska Native populations, many of which are Alutiiq. The Alutiiq culture relies on the harvesting of fish, marine vertebrates, and marine mammals. Salmon caught in both salt and fresh water have been extremely important resources and Alutiiq peoples have traditionally hunted whales (Himes-Cornell et al., 2013).

**Table 4-9 Vessels greater than 56' LOA targeting Federal BSAI Pacific cod with H&L or pot gear by community of vessel historic ownership address from 2008 through 2020 (number of vessels)**

Region	Community	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Annual Average 2008-2020 (number)	Annual Average 2008-2020 (percent)	Unique Vessels 2008-2020 (number)
Alaska	<b>Dutch Harbor/Unalaska</b>	1	1	0	2	1	1	1	1	1	1	1	1	2	1.1	5.62%	3
	Anchor Point	1	1	1	0	0	0	0	0	0	0	0	0	0	0.2	1.20%	1
	Homer	1	1	1	1	2	2	2	3	4	3	1	3	3	2.1	10.84%	9
	Kodiak	5	2	5	4	5	5	4	4	4	5	9	9	8	5.3	27.71%	15
	<b>Homer/Kodiak/Anchor Point</b>	7	4	7	5	7	7	6	7	8	8	10	12	11	7.6	39.76%	25
	Cordova	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.40%	1
	Girdwood	1	0	0	0	0	0	0	0	0	0	0	1	1	0.3	1.61%	1
	Haines	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.40%	1
	Juneau	0	0	1	0	0	0	1	1	1	1	0	0	1	0.5	2.41%	3
	Kenai	0	1	1	1	0	0	0	0	0	0	0	0	0	0.2	1.20%	1
	Ketchikan	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.40%	1
	King Cove	0	0	0	0	0	0	0	0	0	0	0	2	0	0.2	0.80%	2
	Klawock	0	0	0	0	0	1	0	1	0	0	0	0	0	0.2	0.80%	1
	Nikolaevsk	0	1	0	0	0	0	0	0	0	0	0	0	0	0.1	0.40%	1
	Petersburg	0	1	1	0	0	1	0	2	2	1	2	1	3	1.1	5.62%	5
	Sand Point	0	1	0	0	0	0	0	0	0	0	0	1	1	0.2	1.20%	2
	Seward	0	0	0	0	1	1	1	1	1	1	1	1	1	0.7	3.61%	1
	Sitka	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	0.40%	1
	Wasilla	0	1	1	1	2	2	2	2	2	2	2	2	2	1.6	8.43%	2
	<b>Other AK</b>	3	5	4	2	3	6	4	7	6	5	6	8	10	5.3	27.71%	23
<b>Alaska</b>	11	10	11	9	11	14	11	15	15	14	17	21	23	14.0	73.09%	43	
<b>Washington</b>	5	4	5	6	6	4	3	3	1	2	3	3	4	3.8	19.68%	14	
<b>Other States</b>	2	2	0	0	0	0	0	0	1	3	3	3	4	1.4	7.23%	9	
<b>Grand Total</b>	18	16	16	15	17	18	14	18	17	19	23	27	31	19.2	100.00%	59	

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_lessthan60\_breakouts (5-12-22)

**Table 4-10 Gross ex-vessel revenues for H&L or pot CVs greater than 56' LOA targeting Federal BSAI Pacific cod by community of vessel historic ownership address, 2008 through 2020 (thousands of real 2020 dollars)**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Annual Average gross ex-vessel revenue (\$ thousands)	Annual Average gross ex-vessel revenue (percent)
Dutch/Unalaska	*	*	*	*	*	*	*	*	*	*	*	*	*	\$142	3.1%
Homer/Kodiak/Anchor Point	\$3,643	\$839	\$1,988	\$3,856	\$3,427	\$3,422	\$2,562	\$1,994	\$2,446	\$2,280	\$2,419	\$2,923	\$1,708	\$2,578	42.6%
Other Alaska	*	*	*	*	*	*	*	*	*	*	*	*	*	\$1,404	30.4%
<b>Alaska</b>	<b>\$4,058</b>	<b>\$1,299</b>	<b>\$2,478</b>	<b>\$4,665</b>	<b>\$5,411</b>	<b>\$5,268</b>	<b>\$4,723</b>	<b>\$4,379</b>	<b>*</b>	<b>\$4,482</b>	<b>\$4,575</b>	<b>\$4,309</b>	<b>\$2,684</b>	<b>\$4,123</b>	<b>76.0%</b>
<b>Other States</b>	<b>\$2,594</b>	<b>\$1,653</b>	<b>\$1,477</b>	<b>\$1,674</b>	<b>\$1,517</b>	<b>\$554</b>	<b>\$1,563</b>	<b>\$1,103</b>	<b>*</b>	<b>\$1,315</b>	<b>\$2,270</b>	<b>\$2,279</b>	<b>\$732</b>	<b>\$1,509</b>	<b>24.0%</b>
<b>Grand Total</b>	<b>\$6,652</b>	<b>\$2,952</b>	<b>\$3,955</b>	<b>\$6,339</b>	<b>\$6,928</b>	<b>\$5,822</b>	<b>\$6,286</b>	<b>\$5,483</b>	<b>\$6,153</b>	<b>\$5,797</b>	<b>\$6,845</b>	<b>\$6,588</b>	<b>\$3,416</b>	<b>\$5,632</b>	<b>100.0%</b>

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_lessthan60\_breakouts (5-12-22)

**Table 4-11 Gross ex-vessel revenue diversification for H&L or pot CVs greater than 56' LOA targeting Federal BSAI Pacific cod by community of vessel historic ownership address, 2008 through 2020 (millions of real 2020 dollars)**

Geography	Annual Average Number of Vessels	Annual Average Gross Ex-vessel Revenue from Federal BSAI Pacific od Only (millions 2020 real \$)	Annual Average Gross Ex-vessel Revenue Revenues from All Area, Gear, and Species Fisheries (millions 2020 real \$)	Federal BSAI Pacific cod Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average
Dutch/Unalaska	1.1	\$0.1	\$0.8	18.3%
Homer/Kodiak/Anchor Point	7.7	\$2.6	\$11.4	22.5%
Other Alaska	5.5	\$1.4	\$7.6	18.5%
<b>Alaska</b>	<b>14.3</b>	<b>\$4.1</b>	<b>\$19.8</b>	<b>20.8%</b>
<b>Other States</b>	<b>5</b>	<b>\$1.5</b>	<b>\$6.9</b>	<b>22.0%</b>
<b>Grand Total</b>	<b>19.3</b>	<b>\$5.6</b>	<b>\$26.7</b>	<b>21.1%</b>

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_lessthan60\_breakouts (5-12-22)

**Table 4-12 Revenue diversification for communities with vessels greater than 56' LOA targeting Federal BSAI Pacific cod by gross ex-vessel revenue, 2008 through 2020 (millions of 2020 real dollars)**

<b>Geography</b>	<b>Annual Average Number of Vessels</b>	<b>Annual Average Number of All Commercial Fishing Vessels in those Same Communities</b>	<b>Annual Average Gross Ex-vessel Revenue from Federal BSAI Pacific cod &lt;60' H&amp;L/Pot Only (millions 2020 real \$)</b>	<b>Annual Average Gross Ex-vessel Revenue from All Areas, Gears, and Species Fisheries for the Community Fleet (millions 2020 real \$)</b>	<b>Ex-Vessel Gross Revenue as a Percentage of Total Community Ex-Vessel Gross Revenue Annual Average</b>
Dutch/Unalaska	1.1	14.2	\$0.1	\$4.0	3.5%
Homer/Kodiak/Anchor Point	7.6	649.3	\$2.6	\$221.6	1.2%
Other Alaska	5.3	2,000.2	\$1.4	\$369.2	0.4%
<b>Alaska</b>	<b>14.3</b>	<b>2,663.7</b>	<b>\$4.1</b>	<b>\$594.8</b>	<b>0.7%</b>
<b>Other States</b>	<b>5.2</b>	<b>480.9</b>	<b>\$1.5</b>	<b>\$655.7</b>	<b>0.2%</b>
<b>Grand Total</b>	<b>19.5</b>	<b>3,144.7</b>	<b>\$5.6</b>	<b>\$1,250.5</b>	<b>0.5%</b>

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_lessthan60\_breakouts (5-12-22)

#### 4.5.2. H&L or Pot CVs Less Than or Equal to 56' LOA

Table 4-13 provides a count, by community of ownership address and year (2008-2020), of H&L or pot CVs less than or equal to 56' LOA for all Alaska communities as well as Washington and other states (primarily Oregon and California) with any vessels active in the BSAI Pacific cod less than 60' H&L or pot CV sector during this time. Data confidentiality constraints limit the amount of revenue information that can be provided for vessels in the less than or equal to 56' LOA size category on a community or aggregated community-level.

There are 32 unique vessels less than or equal to 56' LOA that have targeted Federal BSAI Pacific cod in the less than 60' H&L or pot CV sector (2008-2020), of which 28 (83 percent) have a reported ownership address in an Alaska community. **Dutch Harbor/Unalaska has the largest number of unique vessels with a registered ownership address at 11 followed by Homer at seven.** Dutch Harbor/Unalaska's<sup>19</sup> economy is based on commercial fishing, fish processing, and fleet service, such as maintenance, trade, repairs, fuel and transportation. Onshore and offshore processors provide some local employment; however, non-resident workers are usually present during peak seasons, particularly during the pollock A season. Commercially significant species harvested by vessels with a registered ownership address in Dutch Harbor/Unalaska include Pacific cod, halibut, and salmon (Wise et al., 2021).

Table 4-14 reports the gross ex-vessel revenues for H&L or pot CVs less than or equal to 56' from the Federal BSAI Pacific cod fishery by community of vessel historical ownership address (2008-2020, 2020 real \$). H&L or pot CVs that are less than or equal to 56' LOA with an Alaska community ownership address generated approximately \$737,000 in annual average gross ex-vessel revenues from the Federal BSAI Pacific cod fishery, which is 19.5 percent of all gross ex-vessel revenues for those vessels in the same time period (Table 4-15).

During the same time period, the Dutch Harbor/Unalaska community fleet (all commercial fishing vessels with a registered ownership address participating in any area, gear, and species fisheries) annually averaged approximately \$4 million in gross ex-vessel revenue for all commercial fisheries, of which Federal BSAI Pacific cod caught in the less than 60' H&L or pot CV sector accounted for approximately 10 percent (\$400,000) of the total combined revenue for the Dutch Harbor/Unalaska community fleet (Table 4-16).

Overall, these data suggest that, while the majority of vessels operating in the less than 60' H&L or pot CV sector have a reported ownership address in an Alaska community, there is variation for reported owner address among the different vessel LOA categories. Most notably, Kodiak has the largest number of reported vessel owners for H&L or pot CVs greater than 56' LOA whereas Dutch Harbor/Unalaska has the largest number of reported owners for smaller H&L or pot CVs. **Therefore, under Alternative 2, it is anticipated there could be a distributional impact at the community-level.**

---

<sup>19</sup> Unalaska Island has been inhabited for thousands of years by Alaska Natives, primarily the Unangan. Subsistence activities are important to the Unangan peoples and to many long-term, non-Native residents of Dutch Harbor/Unalaska. According to a survey conducted by AFSC in 2011, community leaders reported that more important subsistence marine or aquatic resources to residents are sockeye salmon, halibut, coho salmon, and crab (Himes-Cornell et al., 2013).

**Table 4-13 Vessels less than or equal to 56' LOA targeting Federal BSAI Pacific cod with H&L or pot gear by community of vessel historic ownership address from 2008 through 2020 (number of vessels)**

Region	Community	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Annual Average 2008-2020 (number)	Annual Average 2008-2020 (percent)	Unique Vessels 2008-2020 (number)	
Alaska	<b>Dutch Harbor/Unalaska</b>	6	5	4	4	4	5	5	4	2	2	2	2	2	3.6	46.08%	11	
	Anchor Point	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.96%	1	
	Homer	2	1	0	0	0	0	0	0	0	0	1	1	2	4	0.8	10.78%	7
	Kodiak/Port Lions	2	1	0	1	0	0	0	0	0	0	0	0	0	0	0.3	3.92%	3
	<b>Homer/Kodiak/Anchor Point</b>	4	3	0	1	0	0	0	0	0	0	1	1	2	4	1.2	15.69%	11
	Adak	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0.2	2.94%	2
	Delta Junction	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.98%	1
	Douglas	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0.2	1.96%	2
	False Pass	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.98%	1
	Juneau	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0.2	1.96%	1
	King Salmon	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.98%	1
	Mekoryuk	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0.1	0.98%	1
	Nikolaevsk	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0.2	1.96%	1
	Nome	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.98%	1
	Petersburg	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0.4	4.90%	1
	Sitka	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.1	0.98%	1
	Soldotna	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0.1	0.98%	1
	Willow	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	0.98%	1
	<b>Other AK</b>	1	4	2	2	1	1	0	1	1	1	1	1	4	3	1.7	21.57%	14
	<b>Alaska</b>	11	12	6	7	5	6	5	5	5	3	4	4	8	9	6.5	83.33%	28
<b>Washington</b>	1	0	0	0	0	1	1	1	1	1	1	1	1	1	0.7	8.82%	2	
<b>Other States</b>	0	0	0	0	2	2	1	1	1	1	0	1	0	0	0.6	7.84%	4	
<b>Grand Total</b>	12	12	6	7	7	9	7	7	7	5	5	6	9	10	7.8	100.00%	32	

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_lessthan60\_breakouts (5-12-22)



**Table 4-14 Gross ex-vessel revenues for H&L or pot CVs less than or equal to 56' LOA targeting Federal BSAI Pacific cod by community of vessel historic ownership address, 2008 through 2020 (thousands of real 2020 dollars)**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Annual Average (\$ thousands)	Annual Average (percent)
Dutch/Unalaska	*	*	*	*	*	*	*	*	*	*	*	*	*	\$401	36.8%
Homer/Kodiak/Anchor Point	\$921	\$11	\$0	\$0	\$0	\$0	\$0	\$0	\$0	*	*	*	\$618	\$171	10.2%
Other Alaska	*	\$69	*	*	*	*	*	*	*	*	*	\$737	\$116	\$165	16.7%
<b>Alaska</b>	*	\$393	\$238	\$469	*	\$561	*	*	*	*	*	*	*	\$737	63.7%
<b>Other States</b>	*	\$0	\$0	\$0	*	\$200	*	*	*	*	*	*	*	\$357	36.3%
<b>Grand Total</b>	\$1,514	\$393	\$238	\$469	\$676	\$760	\$2,181	\$1,110	\$928	\$1,319	\$1,481	\$2,068	\$1,086	\$1,094	100.0%

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_lessthan60\_breakouts (5-12-22)

**Table 4-15 Gross ex-vessel revenue diversification for H&L or pot CVs less than or equal to 56' LOA targeting Federal BSAI Pacific cod by community of vessel historic ownership address, 2008 through 2020 (millions of real 2020 dollars)**

Geography	Annual Average Number of Vessels	Annual Average Ex-Vessel Gross Revenues from Federal BSAI Pacific cod Only (millions 2020 real \$)	Annual Average Total Ex-Vessel Gross Revenues from All Area, Gear, and Species Fisheries	Annual Average Federal BSAI Pacific cod Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue
Dutch/Unalaska	3.6	\$0.4	\$1.9	21.2%
Homer/Kodiak/Anchor Point	1.2	\$0.2	\$0.7	22.8%
Other Alaska	1.7	\$0.2	\$1.1	14.6%
<b>Alaska</b>	6.5	\$0.7	\$3.8	19.5%
<b>Other States</b>	1.3	\$0.4	\$1.7	21.6%
<b>Grand Total</b>	7.8	\$1.1	\$5.4	20.2%

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_lessthan60\_breakouts (5-12-22)

**Table 4-16 Revenue diversification for communities with vessels less than or equal to 56' LOA targeting Federal BSAI Pacific cod by gross ex-vessel revenue, 2008 through 2020 (millions of 2020 real dollars)**

<b>Geography</b>	<b>Annual Average Number of Vessels</b>	<b>Annual Average Number of All Commercial Fishing Vessels in those Same Communities</b>	<b>Annual Average Ex-Vessel Gross Revenues from Federal BSAI Pacific cod &lt;60' H&amp;L/Pot Only (millions 2020 real \$)</b>	<b>Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries for the Community Fleet (millions 2020 real \$)</b>	<b>Ex-Vessel Gross Revenue as a Percentage of Total Community Ex-Vessel Gross Revenue Annual Average</b>
Dutch/Unalaska	3.6	14.7	\$0.4	\$4.0	9.7%
Homer/Kodiak/Anchor Point	1.2	642.6	\$0.1	\$221.6	0.0%
Other Alaska	1.7	1,043.5	\$0.2	\$166.1	0.1%
<b>Alaska</b>	<b>6.5</b>	<b>1,700.8</b>	<b>\$0.7</b>	<b>\$391.7</b>	<b>0.2%</b>
<b>Other States</b>	<b>1.3</b>	<b>244.3</b>	<b>\$0.4</b>	<b>\$566.0</b>	<b>0.1%</b>
<b>Grand Total</b>	<b>7.8</b>	<b>1,945.2</b>	<b>\$1.1</b>	<b>\$957.7</b>	<b>0.1%</b>

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_lessthan60\_breakouts (5-12-22)

### 4.5.3. Jig Vessels

It is anticipated that BSAI Pacific cod jig sector vessels would be impacted under Alternative 2 (option 1 and option 2) as H&L or pot CVs either less than or equal to either 55' or 56' LOA would be eligible for a new BSAI Pacific cod small vessel sector. However, the potential impacts would be most acute in a scenario where the jig sector's B season would not be a jig only fishery (the suboption) as the B season is when these vessels have historically made the majority of their BSAI Pacific cod deliveries since 2008 (see Table 4-7 for reference). Data confidentiality constraints limit the amount of revenue information that can be provided for jig vessels on a community or aggregated community-level.

Table 4-17 provides a count, by community of ownership address and year (2008-2020), of BSAI Pacific cod jig sector vessels for Alaska communities as well as other states. There are 33 jig vessels that have participated in the Federal BSAI Pacific cod target fishery from 2008 through 2020. Of these 33 BSAI Pacific cod jig vessels, 27 (87 percent) have a registered ownership address in an Alaska community. **Akutan, Dutch Harbor/Unalaska, and Kodiak have each had four unique vessels participate in the BSAI Pacific cod jig sector during the analyzed time period.** However, jig vessels with Akutan as a reported ownership address have not participated in the Federal BSAI Pacific cod jig sector since 2014. Additionally, in more recent years, there is one jig vessel with a reported owner address of Homer that regularly participates in the Federal BSAI Pacific cod jig fishery. Homer<sup>20</sup> is located on the north shore of Kachemak Bay on the southwestern edge of the Kenai Peninsula, and its economy relies on commercial fishing, sport fishing and hunting, and ecotourism. Commercially significant species harvested by vessels with a registered ownership address in Homer include salmon, halibut, Pacific cod, sablefish, and crab (Wise et al., 2021).

Table 4-18 reports the gross ex-vessel revenue diversification for jig vessels by the community of the vessel's historical ownership address (2008-2020). Vessels with an Alaska community ownership address participating in the BSAI Pacific cod jig sector over 2008-2020 generated approximately \$79,000 in annual average gross ex-vessel revenue, which is approximately 21 percent of all gross ex-vessel revenues for those vessels in the same period. From 2008 through 2020, the Homer/Kodiak community fleet (all commercial fishing vessels participating in any area, gear, and species fisheries) annually averaged approximately \$218 million in gross ex-vessel revenue for all commercial fisheries, of which BSAI Pacific cod caught in the jig sector accounted for approximately .02 percent (\$50,000) of the total combined revenue of the Homer/Kodiak fleet (Table 4-19).

---

<sup>20</sup> The Homer area is the traditional homelands of the Dena'ina Peoples. Subsistence activities are important to Alaska Native and many long-term, non-Native residents of Homer, particularly marine mammals, salmon, halibut and crab (Fall et al., 2018).

Table 4-17 Vessels targeting Federal BSAI Pacific cod with jig gear by community of vessel historic ownership address, 2008 through 2020

Region	Community	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Annual Average 2008-2020 (number)	Annual Average 2008-2020 (percent)	Unique Vessels 2008-2020 (number)	
Alaska	Akutan	2	2	3	1	1	1	1	0	0	0	0	0	0	0.8	18.03%	4	
	Dutch Harbor/Unalaska	2	0	1	1	1	0	0	2	0	0	0	0	0	0.5	11.48%	4	
	<b>Akutan/Dutch Harbor/Unalaska</b>	<b>4</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.4</b>	<b>29.51%</b>	<b>8</b>	
	Homer	0	0	0	1	0	0	1	1	1	1	1	1	1	0.6	13.11%	2	
	Kodiak	1	0	2	3	1	0	0	0	0	1	0	0	0	0.6	13.11%	4	
	<b>Homer/Kodiak/Anchor Point</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1.2</b>	<b>26.23%</b>	<b>6</b>	
	Adak	1	0	0	0	0	0	0	0	0	0	0	0	1	0.2	4.92%	2	
	Anchorage	3	0	0	0	0	0	0	0	0	0	0	0	0	0.2	4.92%	3	
	Chefornak	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	1.64%	1	
	Juneau	1	0	0	0	0	0	0	0	0	0	0	0	0	0.1	1.64%	1	
	Mekoryuk	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	1.64%	1	
	Newtok	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	1.64%	1	
	Port Lions	1	1	0	1	1	1	0	0	0	0	0	0	1	0.5	9.84%	3	
	Sand Point	0	0	0	2	0	0	0	0	0	0	0	0	0	0.2	3.28%	2	
	Toksook Bay	0	0	0	0	0	1	0	0	0	0	0	0	0	0.1	1.64%	1	
	<b>Other AK</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>1</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>1.5</b>	<b>31.15%</b>	<b>14</b>
	<b>Alaska</b>	<b>11</b>	<b>3</b>	<b>6</b>	<b>9</b>	<b>4</b>	<b>6</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4.1</b>	<b>86.89%</b>	<b>27</b>	
	<b>Other States</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.6</b>	<b>13.11%</b>	<b>7</b>	
<b>Grand Total</b>	<b>15</b>	<b>3</b>	<b>7</b>	<b>11</b>	<b>4</b>	<b>6</b>	<b>2</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4.7</b>	<b>100.00%</b>	<b>33</b>		

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_jig\_breakouts (5-12-22)

**Table 4-18 Gross ex-vessel revenue diversification for jig vessels targeting Federal BSAI Pacific cod by community of vessel historic ownership address, 2008 through 2020 (millions of real dollars)**

<b>Geography</b>	<b>Annual Average Number of Vessels</b>	<b>Annual Average Ex-Vessel Gross Revenues from Federal BSAI Pacific cod Only (millions 2020 real \$)</b>	<b>Annual Average Total Ex-Vessel Gross Revenues from All Area, Gear, and Species Fisheries (millions 2020 real \$)</b>	<b>Federal BSAI Pacific cod Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average</b>
Akutan/Dutch/Unalaska	1.4	\$0.009	\$0.050	17.5%
Homer/Kodiak	1.2	\$0.050	\$0.148	33.8%
Other Alaska	1.5	\$0.021	\$0.182	11.4%
<b>Alaska</b>	<b>4.1</b>	<b>\$0.079</b>	<b>\$0.379</b>	<b>20.9%</b>
<b>Other States</b>	<b>0.6</b>	<b>\$0.020</b>	<b>\$0.069</b>	<b>29.2%</b>
<b>Grand Total</b>	<b>4.7</b>	<b>\$0.099</b>	<b>\$0.448</b>	<b>22.2%</b>

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_jig(5-12-22)

**Table 4-19 Revenue diversification for communities with vessels targeting Federal BSAI Pacific cod with jig gear by gross ex-vessel revenue, 2008 through 2020 (millions of dollars, 2020 real dollars)**

<b>Geography</b>	<b>Annual Average Number of Vessels</b>	<b>Annual Average Number of All Commercial Fishing Vessels in those Same Communities</b>	<b>Annual Average Ex-Vessel Gross Revenues from Federal BSAI Pacific cod jig gear (millions 2020 real \$)</b>	<b>Annual Average Total Ex-Vessel Gross Revenues from All Areas, Gears, and Species Fisheries for the Community Fleet (millions 2020 real \$)</b>	<b>Ex-Vessel Gross Revenue as a Percentage of Total Community Ex-Vessel Gross Revenue Annual Average</b>
Akutan/Dutch/Unalaska	1.4	17.8	\$0.009	\$4.178	0.21%
Homer/Kodiak	1.2	623.7	\$0.050	\$218.037	0.02%
Other Alaska	1.5	551.5	\$0.021	\$132.689	0.02%
<b>Alaska</b>	<b>4.1</b>	<b>1,193.0</b>	<b>\$0.079</b>	<b>\$354.905</b>	<b>0.02%</b>
<b>Other States</b>	<b>0.6</b>	<b>55.5</b>	<b>\$0.020</b>	<b>\$36.182</b>	<b>0.06%</b>
<b>Grand Total</b>	<b>4.7</b>	<b>1,248.5</b>	<b>\$0.099</b>	<b>\$391.087</b>	<b>0.03%</b>

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; smallboat\_SIA\_jig(5-12-22)

#### 4.5.4. Impacts to Processors

H&L or pot CVs greater than 56' and less than or equal to 56' LOA make the majority of their deliveries shoreside in Dutch Harbor/Unalaska (2008 through 2020). The annual average number of shoreside processors in Dutch Harbor/Unalaska receiving BSAI Pacific cod from H&L or pot CVs greater than 56' and less than or equal to 56' H&L or pot CVs is 3 and 2.8, respectively. Floating processors (Washington) are the second largest component of processors for H&L or pot CVs. The annual average number of floating processors (Washington) for H&L or pot CVs greater than 56' LOA is 2.2 and 1.5 for H&L or pot CVs less than 56' LOA. Due to confidentiality restrictions, it is not possible to report the processing activities and the associated revenue for BSAI Pacific cod jig sector vessels. However, processors in Dutch Harbor/Unalaska, Adak, and Akutan have accepted BSAI Pacific cod from jig sector vessel during the 2008-2020 time period.

From 2008 through 2020, processors in Dutch Harbor/Unalaska/Akutan accepting deliveries of Federal BSAI Pacific cod from H&L or pot CVs greater than 56' LOA annually averaged \$268 million in gross ex-vessel revenues for all commercially processed species (all areas, gear, and species), of which BSAI Pacific cod delivered by these vessels accounts for approximately 1.4 percent (\$3.8 million) of the total combined revenue (Table 4-20). Processors in Dutch Harbor/Unalaska/Akutan accepting deliveries of Federal BSAI Pacific cod from H&L or pot CVs less than or equal to 56' LOA annually averaged \$236.5 million in gross ex-vessel revenues for all commercially processed species (all areas, gear, and species), of which BSAI Pacific cod delivered by these vessels accounts for approximately .3 percent (\$800,000) of the total combined revenue (Table 4-21).

**Table 4-20 Revenue diversification for processors receiving Federal BSAI Pacific cod from H&L or pot CVs greater than 56' LOA, 2008 through 2020 (millions of 2020 real dollars)**

<b>Geography</b>	<b>Annual Average Number of Processors</b>	<b>Annual Average Ex-Vessel Gross Revenues from Federal Open Access Pacific cod &lt;57' Hook and Line/Pot Only</b>	<b>Annual Average Total Ex-Vessel Gross Revenues from All Area, Gear, and Species Fisheries</b>	<b>Federal BSAI Pacific cod Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average</b>
Dutch/Unalaska/Akutan	4.0	\$3.8	\$267.9	1.4%
Other Alaska/ Floating Processors	3.3	\$1.2	\$70.7	1.6%
<b>Grand Total</b>	<b>7.3</b>	<b>\$5.0</b>	<b>\$338.6</b>	<b>1.5%</b>

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; small\_boat\_proc\_SIA(5-12-22)

**Table 4-21 Revenue diversification for processors receiving Federal BSAI Pacific cod from H&L or pot CVs less than or equal to 56' LOA, 2008 through 2020 (millions of 2020 real dollars)**

<b>Geography</b>	<b>Annual Average Number of Processors</b>	<b>Annual Average Ex-Vessel Gross Revenues from Federal Open Access Pacific cod &lt;57' Hook and Line/Pot Only</b>	<b>Annual Average Total Ex-Vessel Gross Revenues from All Area, Gear, and Species Fisheries</b>	<b>Federal BSAI Pacific cod Ex-Vessel Value as a Percentage of Total Ex-Vessel Gross Revenue Annual Average</b>
Dutch/Unalaska/Akutan	3.7	\$0.8	\$236.5	0.3%
Other Alaska/ Floating Processors	2.1	\$0.3	\$31.7	0.8%
<b>Grand Total</b>	<b>5.8</b>	<b>\$1.1</b>	<b>\$268.2</b>	<b>0.4%</b>

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive\_FT; small\_boat\_proc\_SIA(5-12-22)

## 5. Management and Enforcement Considerations

This section discusses monitoring and enforcement considerations for the action alternative, Alternative 2. For a detailed explanation of the BSAI Pacific cod fisheries and impacts, see Chapters 3 and 4.

### *Changes to in-season management and allocations*

Under Alternative 2, the redefined less than 60' H&L or pot CV sector that would exclude H&L or pot CVs less than or equal to either 55' or 56' LOA would continue to receive the entirety of their BSAI Pacific cod allocation on January 1. The redefined less than 60' H&L or pot CV sector could receive reallocations from any projected unused jig and H&L or pot CV Pacific cod A season allocation. Under the status quo (Alternative 1), reallocations from the BSAI Pacific cod jig sector to the less than 60' H&L or pot CV sector usually occurs prior to the end of the A season to allow the less than 60' H&L or pot CV sectors to have an extended fishing season. NMFS is able to make these determinations based on data from past years and assesses the current year's participation to project unused jig sector A season allowance.

The hierarchy of the Pacific cod reallocation among non-CDQ sectors for CVs can be found at 50 CFR 679.20(a)(7)(iii)(A). The Council may want to consider how the redefined sectors under Alternative 2 would fit in with the current reallocation hierarchy.

If the Council selects Alternative 2, and recommends maintaining the current allocation hierarchy, that would require the new BSAI Pacific cod small vessel sector's remaining seasonal allowance to be reallocated to the redefined less than 60' H&L or pot CV sector. NMFS may not be able to reallocate from the new BSAI Pacific cod small vessel sectors' A season allocation until closer to the end of March because it is closer to the regulatory closure of April 30. The addition of H&L or pot CVs less than or equal to 55' or 56' LOA (option 1 or option 2) to the current jig sector (forming the new BSAI Pacific cod small vessel sector) may not allow NMFS to project the unused A season allocation until the end of the season, or the full A season allocation may be caught and a reallocation would not be possible. At the late to end of the A season, the redefined less than 60' H&L or pot CV may not be able to participate in the Pacific cod fishery as the fishery participants may choose to move to other fisheries.

Under Alternative 2, the Council could decide to remove the current regulation that requires the jig sectors' remaining seasonal allowance to be reallocated to the redefined 60' H&L or pot CV sector (50 CFR 679.20(a)(7)(iv)(C) and instead allow it to rollover to the new BSAI Pacific cod small vessel sector B season (option 1 and 2) or the jig sector B season only (Suboption). The Council could maintain the current regulation to require the new small vessel sectors' remaining A season allowance to be reallocated to what would be the redefined less than 60' H&L or pot CV sector even though the sector may not participate in the BSAI Pacific cod fishery until September 1<sup>st</sup> when the sector relies on reallocations from other BSAI Pacific cod sectors to reopen the fishery.

If the Council selects Alternative 2 and the BOF reconsiders the trigger for opening the DHS GHF fishery, it will be more difficult to track Federal and GHF landings of BSAI Pacific cod. NMFS would rely on the vessel reporting the correct statistical area on the fish ticket. It is anticipated that the BOF will choose to close the parallel fishery to pot gear while the GHF fishery is occurring, therefore any pot landings reported in State waters would be attributed to the GHF fishery and anything in Federal waters would be attributed to the Federal BSAI Pacific cod fishery. However, there could be instances where catch is attributed to the incorrect fishery due to vessel's misreporting of statistical areas, and it is not uncommon for there to be reporting inaccuracies.



Vessels that participate in the Federal BSAI Pacific cod less than 60' H&L or pot CV sector with an FFP are required to have VMS transmitting (50 CFR 679.28(f)(6)) so fishery managers and OLE could track whether a vessel was inside or outside of State waters. The GHL fisheries are closely managed by the State and a vessel must be registered to participate. Once registered, that vessel would not be allowed to fish in Federal waters until they un-registered for the State fishery. It is anticipated that the State would notice any stat area misreporting relatively quickly.

### *Observer Coverage*

Current observer coverage requirements for CVs that participate in the current less than 60' H&L or pot CV and jig sectors are defined in regulations at 50 CFR 679.51(a):

- Partial coverage for CVs designated on an FFP including CVs deploying H&L, pot, and jig gear;
- Full coverage for CVs while using H&L gear when groundfish CDQ fishing except for CVs less than or equal to 46 ft LOA which are in the partial coverage category.

For the partial coverage category there are three pools of coverage: no-selection pool, observer trip-selection pool, and EM selection pool. The observer trip-selection pool includes vessels in the partial coverage category that are greater than 40' LOA and are fishing H&L or pot gear. The no-selection pool includes vessels less than 40' LOA and vessels fishing with jig gear. Each year NMFS develops an Annual Deployment Plan in consultation with the Council to describe how observer coverage and electronic monitoring will be assigned to vessels and processors in the partial observer coverage category for the upcoming year. Coverage levels in the partial coverage category can be adjusted if needed, however, **the action alternatives considered by the Council would likely have a minimal impact on selection rates and deployment. There would be no changes to current observer coverage requirements as defined in regulations.**

### *Enforcement Concerns*

The BSAI Pacific cod fisheries are a complex management system for OLE officials who are tasked with enforcing regulations and understanding the nuances between sectors and management jurisdictions. Chapter 3 provides an overview of BSAI Pacific cod management for Federal and State fisheries including the interplay of management requirements. OLE works with fishery participants across State and Federal fisheries, USCG, and the Observer Program to coordinate management, apply regulations, and ensure accurate reporting.

One of the common challenges experienced by OLE and USCG enforcement officials and fishery participants is the growth period after implementation of new regulations and programs. Another challenge is ensuring compliance for participants in Federal and State fisheries and management areas. For example, VMS and the status of fisheries are tools used by enforcement to determine where vessels are fishing and which areas and fisheries are open or closed. However, regulations for the BSAI Pacific cod fisheries are intricate and extensive. As more regulations are added, there are cumulative impacts that directly affect compliance and clarity for enforcement and fishery participants. Alternative 2 would add another layer to an already complex management structure and require added coordination with other agencies such as the State and USCG to ensure compliance for the redefined and newly defined sectors.

### *Additional Considerations*

In June 2021, the Council developed alternatives for analysis based on vessel LOA. As described in Section 4.1 of the analysis, LOA as reported to the CFEC is used in this analysis because it is likely the best source of data for length. The data is collected when vessel owners report the length to NMFS on their FFP and to the CFEC. For compliance with regulations, OLE periodically boards vessels dockside

and measures LOA. During these boardings, OLE often finds discrepancies between the length reported and the LOA measured during the boarding, especially for smaller vessels. Given this information, analysts advise the Council to consider the following caveats regarding the LOA data:

- There are different definitions of length and different ways to measure vessels across management jurisdictions. For example, fishery participants might report the USCG registered length to CFEC instead of using the definition of LOA at 50 CFR 679.2.
- Vessel owners in both Federal and State fisheries may modify their vessel without submitting new survey information to NMFS or CFEC to amend the size of their vessel on their permits.
- When a vessel owner amends the vessel length, the owner must submit a current vessel survey to both agencies to update the FFP and CFEC permits. However, vessel owners do not always make the change to both permits.

Therefore, while LOA is likely the best data source, there are still potentially significant data quality issues and reporting lags. NMFS relies on this length data for management of Federal fisheries and accurate reporting aids compliance. Under Alternative 2, if a length qualifier is used, this may be an incentive for vessel owners to update the length reported on their permits for inclusion or alter the vessel size to be included in a preferred sector. For example, it is possible that smaller H&L or pot CVs might prefer to compete in a sector with more TAC available and could choose to extend the length of their vessel to be eligible for the redefined less than 60' H&L or pot CV sector. Conversely, a larger H&L or pot vessel that does not have additional efficiencies could shorten their LOA to be eligible for the new BSAI Pacific cod small vessel sector.

**Table 5-1 Comparison of definitions of vessel length and ways to measure vessels across management jurisdictions**

Federal regulations	<p style="text-align: center;">679.2 Definitions</p> <p style="text-align: center;">Length overall (LOA) of a vessel means the centerline longitudinal distance, rounded to the nearest foot, measured between:</p> <p>(1) The outside foremost part of the vessel visible above the waterline, including bulwarks, but excluding bowsprits and similar fittings or attachments, and</p> <p>(2) The outside aftermost part of the vessel visible above the waterline, including bulwarks, but excluding rudders, outboard motor brackets, and similar fittings or attachments (see <a href="#">Figure 6</a> to this part).</p>
CFEC regulations	<p style="text-align: center;">Sec 16.05.530 Renewal of vessel license.</p> <p>(b) For calendar year 2006 and following years, the annual fee for a vessel license issued or renewed under this section is set according to the overall length, as <b>defined by the United States Coast Guard</b></p>
USCG code	<p style="text-align: center;">46 U.S. Code 2101(28)(b).</p> <p style="text-align: center;">(28) "overall in length" means -</p> <p>(A) for a foreign vessel or a vessel engaged on a foreign voyage, the greater of -</p> <p>(i) 96 percent of the length on a waterline at 85 percent of the least molded depth measured from the top of the keel (or on a vessel designed with a rake of keel, on a waterline parallel to the designed waterline); and</p> <p>(ii) the length from the fore side of the stem to the axis of the rudder stock on the waterline: and</p> <p style="text-align: center;"><b>(B) for any other vessel, the horizontal distance of the hull between the foremost part of the stern and the aftermost part of the stem, excluding fittings and attachments.</b></p>
ADF&G regulations	<p style="text-align: center;">5 AAC 28.690. Vessel length restrictions for the Bering Sea-Aleutian Islands Area for groundfish</p> <p style="text-align: center;"><b>(d) In this section, "overall length" means the straight line length between extremities of the vessel, excluding anchor rollers.</b></p>

## 6. Affected Small Entities (Regulatory Flexibility Act Considerations)

Section 603 of the Regulatory Flexibility Act (RFA) requires that an initial regulatory flexibility analysis (IRFA) be prepared to identify if a proposed action will result in a disproportionate and/or significant adverse economic impact on the directly regulated small entities, and to consider any alternatives that would lessen this adverse economic impact to those small entities. NMFS Alaska region will prepare the IRFA in the classification section of the proposed rule for an action and a separate IRFA is not necessary for Council final actions on the issue. This section will provide information that NMFS will use to

prepare the IRFA for this action, namely a description and estimate of the number of small, directly regulated entities to which the proposed action will apply.

The proposed action would redefine the BSAI Pacific cod jig sector as the new BSAI Pacific cod small vessel sector which would include H&L or pot CVs less than or equal to either 55' or 56' LOA (option 1 and 2, respectively) and jig CVs and CPs. The current less than 60' H&L or pot CV sector would be redefined to exclude H&L or pot CVs less than or equal to either 55' or 56' LOA.

### **Identification of Directly Regulated Entities**

Entities that could be directly regulated by this action include vessels operating in the Federal BSAI Pacific cod less than 60' H&L or pot CVs and jig CV/CP sectors. This section identifies all entities that could be considered directly regulated entities under the range of alternatives considered and likely represents an overestimate of the number of small entities that would be directly regulated by any one action alternative.

### **Count of Small, Directly Regulated Entities**

Under the RFA, businesses that are classified as primarily engaged in commercial fishing are considered small entities if they have combined annual gross receipts not in excess of \$11.0 million for all affiliated operations worldwide, regardless of the type of fishing operation (81 FR 4469; January 26, 2016). If a vessel has a known affiliation with other vessels – through a business ownership or through a cooperative – these thresholds are measured against the small entity threshold based on the total gross revenues of all affiliated vessels. In the most recent five years for which data are available (2016 through 2020) there were 58 active vessels that participated in the Federal BSAI Pacific cod less than 60' H&L or pot CV and jig sectors. Of these 58 vessels, 55 were active in the less than 60' H&L or pot CV and jig sectors in 2020 and all but one vessel are considered small entities.

- Five vessels participated in the BSAI Pacific cod jig sector (2016 through 2020), of which three were active in 2020. All of these vessels are considered small entities.
- 15 H&L or pot CVs less than or equal to 56' LOA participated in the BSAI Pacific cod fishery (2016 through 2020), of which 14 were active in 2020. All of these vessels are considered small entities.
- 40 H&L or pot CVs greater than 56' LOA participated in the less than 60' H&L or pot CV sector (2016 through 2020), of which 38 were active in 2020. 37 of the 38 vessels are considered small entities.

## **7. Summation of the Alternatives with Respect to Net Benefit to the Nation**

Overall, this action is likely to have a limited effect on the net benefits to the Nation. Under the status quo (Alternative 1), vessels in the BSAI Pacific cod less than 60' H&L or pot CV sector would continue to harvest BSAI Pacific cod from their 2 percent allocation. This could impact H&L or pot CVs less than or equal to either 55' or 56' LOA (option 1 and option 2, respectively) as they compete against larger H&L or pot CVs in the sector with additional efficiencies and capacity typically associated with vessels 58' or greater. However, it does not appear that H&L or pot CVs greater than 56' are harvesting a larger portion of the sector's final allocation over time (see Figure 4-1). As such, the extent of these potential effects is difficult to predict and depends on several factors, including future levels of BSAI Pacific cod TAC and future fishing activity.

Under Alternative 2, H&L or pot vessels that are less than or equal to either 55' or 56' LOA (option 1 and option 2, respectively) would be eligible to harvest BSAI Pacific cod from the jig sector's allocation (1.4

percent). This action could potentially provide benefits to H&L or pot vessels less than or equal to 55' (28 vessels) or 56' (5 vessels) LOA that have historically participated in the BSAI Pacific cod less than 60' H&L or pot CV sector. However, as described in Chapter 4, under Alternative 2, there is a distinct possibility of incidental allocation effects that would impact H&L or pot CVs that are greater than 56' LOA and would remain in the redefined less than 60' H&L or pot CV sector.

Historically common patterns of annual reallocations from the BSAI Pacific cod jig sector to the less than 60' H&L or pot CV sector, which has occurred every year since 2008, are likely to be impacted under Alternative 2. This would represent a change in historical patterns of use between sectors as seen over the 2008-2021 period. These effects could occur under option 1 and option 2 and are more likely under option 2 which includes 56' H&L or pot CVs. As a result, this action would have distributional effects on historical participants in the less than 60' H&L or pot CV sector as routine reallocation(s) of BSAI Pacific cod from the jig sector to the less than 60' H&L or pot CV sector (status quo) would instead be utilized by the new BSAI Pacific cod small vessel sector.

There is potential for NMFS to reallocate any projected remaining BSAI Pacific cod TAC from the new BSAI Pacific cod small vessel sector to the redefined less than 60' H&L or pot CV sector which could mitigate some of distribution effect of this action. However, it is uncertain if or when NMFS would know whether any TAC would be available from the new BSAI Pacific cod small vessel sector to reallocate to the redefined less than 60' H&L or pot CV sector. This could have cumulative effects on these vessel's safety, and it is more challenging for NMFS to conservatively manage a fishery with smaller quotas and fished at a faster pace. However, any reduction in operational efficiency could be somewhat offset by the potential benefits identified in the Council's problem statement that would accrue from supporting smaller H&L or pot CVs that could benefit from harvesting BSAI Pacific cod from the jig sector's allocation absent the competition from larger H&L or pot CVs with modified capacity and efficiencies.

## 8. Magnuson-Stevens Act and FMP Considerations

Below are the 10 National Standards as contained in the MSA. In recommending a preferred alternative at final action, the Council must consider how to balance the National Standards.

A brief discussion of this action with respect to each National Standard will be prepared for final action.

### 8.1. Magnuson-Stevens Act National Standards

Below are the 10 National Standards as contained in the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). In recommending a preferred alternative at final action, the Council must consider how to balance the national standards.

A brief discussion of this action with respect to each National Standard will be prepare for Council final action.

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

**National Standard 2** — Conservation and management measures shall be based upon the 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.

**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 United States 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.

**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.

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

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

**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 by utilizing economic and social data that meet the requirements of National Standard 2, 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.

**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.

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

## **8.2. 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 or 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 RIR for this FMP amendment constitutes the fishery impact statement. The likely effects of the proposed action are analyzed and described throughout this RIR, particularly Chapter 4. The effects of the proposed action on participants in the fisheries and fishing communities are evaluated in sections 4.3 and 4.5. The effects of the proposed action on safety of human life at sea are evaluated in Section 4.3.3.

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.

### 8.3. Council's Ecosystem Vision Statement

In February 2014, the Council adopted, as Council policy, the following:

#### **Ecosystem Approach for the North Pacific Fishery Management Council**

##### ***Value Statement***

*The Gulf of Alaska, Bering Sea, and Aleutian Islands are some of the most biologically productive and unique marine ecosystems in the world, supporting globally significant populations of marine mammals, seabirds, fish, and shellfish. This region produces over half the nation's seafood and supports robust fishing communities, recreational fisheries, and a subsistence way of life. The Arctic ecosystem is a dynamic environment that is experiencing an unprecedented rate of loss of sea ice and other effects of climate change, resulting in elevated levels of risk and uncertainty. The North Pacific Fishery Management Council has an important stewardship responsibility for these resources, their productivity, and their sustainability for future generations.*

##### ***Vision Statement***

*The Council envisions sustainable fisheries that provide benefits for harvesters, processors, recreational and subsistence users, and fishing communities, which (1) are maintained by healthy, productive, biodiverse, resilient marine ecosystems that support a range of services; (2) support robust populations of marine species at all trophic levels, including marine mammals and seabirds; and (3) are managed using a precautionary, transparent, and inclusive process that allows for analyses of tradeoffs, accounts for changing conditions, and mitigates threats.*

##### ***Implementation Strategy***

*The Council intends that fishery management explicitly take into account environmental variability and uncertainty, changes and trends in climate and oceanographic conditions, fluctuations in productivity for managed species and associated ecosystem components, such as habitats and non-managed species, and relationships between marine species. Implementation will be responsive to changes in the ecosystem and our understanding of those dynamics, incorporate the best available science (including local and traditional knowledge), and engage scientists, managers, and the public.*

*The vision statement shall be given effect through all of the Council's work, including long-term planning initiatives, fishery management actions, and science planning to support ecosystem-based fishery management.*

In considering this action, the Council is being consistent with its ecosystem approach policy. There are no anticipated impacts to the human environment and this action would continue to support productive and resilient marine ecosystems. Additionally, this action could potentially provide benefits to H&L or pot vessels less than or equal to either 55' or 56' LOA currently operating in the BSAI Pacific cod less than 60' H&L or pot CV sector, and there are no anticipated direct or indirect impacts on the subsistence harvest, sharing or use of BSAI Pacific cod.

## 9. Preparers and Persons Consulted

### Preparers

Kate Haapala, NPFMC  
Jon McCracken, NPFMC  
Abby Jahn, NMFS

### Contributors

Alicia M. Miller, NMFS  
Mary Furuness, NMFS  
Krista Milani, NMFS  
Mike Fey, AKFIN  
Bridget Mansfield, NMFS  
Asia Beder, ADFG



## 10. References

- Alaska Fisheries Science Center (AFSC). 2019. Wholesale Market Profiles for Alaska Groundfish and Crab Fisheries. <http://www.mcdowellgroup.net/wp-content/uploads/2020/09/wholesale-market-profiles-for-alaska-groundfish-and-crab-fisheries-noaa.pdf>.
- Fall, J. A., A. Godduhn, G. Halas, L. Hutchinson-Scarborough, B. Jones, E. Mikow, L.A. Sill, A. Trainor, A. Wiita & T. Lemons. 2018. Alaska subsistence and personal use salmon fisheries 2015 annual report. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 440, Anchorage.
- Farrington, C. 2015. Super 8 vessels for CFEC in-house use, CFEC Report 15-5N.
- Himes-Cornell, A., K. Hoelting, C. Maguire, L. Munger-Little, J. Lee, J. Fisk, R. Felthoven, C. Geller, and P. Little. 2013. Community profiles for North Pacific fisheries - Alaska. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-AFSC-259, Volumes 1-12. NPFMC. 2016. Bering Sea/Aleutian Islands Groundfish Fishery Management Plan Amendment Action Summaries.
- NPFMC. 2019. The BSAI Pacific Cod Allocation Review Analyzed the BSAI Pacific cod Allocations Established Under Amendment 85. [https://www.npfmc.org/wp-content/PDFdocuments/catch\\_shares/Pcod/BSAIPcodAllocationReview2019.pdf](https://www.npfmc.org/wp-content/PDFdocuments/catch_shares/Pcod/BSAIPcodAllocationReview2019.pdf)
- NPFMC. 2021. RIR/EA for Proposed Amendment to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area and Gulf of Alaska Management Area. BSAI Pacific cod Trawl Catcher Vessel Cooperative Program. <https://meetings.npfmc.org/CommentReview/DownloadFile?p=b8e19123-5e2d-4dd6-a541-5eed3c5788dc.pdf&fileName=C4%20Trawl%20CV%20Cod%20Analysis%20.pdf>
- NMFS. 2020. Stock Assessment and Fishery Evaluation (SAFE) Report for the Groundfish Fisheries of the Gulf of Alaska and Bering Sea/Aleutian Islands Area: Economic Status of the Groundfish Fisheries off Alaska <https://meetings.npfmc.org/CommentReview/DownloadFile?p=bc83c1f0-2cc5-49a4-850c-ee822082b6be.pdf&fileName=D7%20Groundfish%20Economic%20SAFE.pdf>
- Reedy, K. and H. Maschner. 2014. Traditional foods, corporate controls: networks of household access to key marine species in southern Bering Sea villages. *Polar Record*, 50(225), 364-378.
- Wise, S., K. Sparks, J. Lee, and S. Kasperski. Annual Community Engagement and Participation Overview. AFSC, NOAA. March 19, 2021

Unalaska Native Fishermen's Association PO Box 591, Unalaska, AK 99685

## Securing Unalaska's Small Boat Future



### **The Issue: Loss of Small Boat Access in Bering Sea Cod Fisheries**

The Unalaska Native Fishermen's Association (UNFA) has always worked to create and preserve small boat fishing opportunity for current and future generations of Unalaska's community-based fleet. Our work includes spearheading the creation of the jig sector allocation, and pioneering the creation of the Under 60 sector. In both cases, UNFA worked within the North Pacific Fishery Management Council (NPFMC) process to ensure entry-level and small boat opportunity in Bering Sea Pacific cod fisheries.

In the past decade, Unalaska's small boat fleet has suffered a dramatic loss of fishing opportunity. The benefits of UNFA's previous efforts have shifted away from Bering Sea communities. The changing nature of the Under 60 sector in particular threatens the survival of Unalaska's small boat fleet, and diminishes past NPFMC actions intended to protect community access and participation in Bering Sea Pacific cod fisheries.

### **The Under 60 Sector Today**

When the Under 60 sector was created in the late 1990s, the sector was made up of primarily local, small boats. In 2003, the Under 60 sector was comprised of seven vessels. In 2018, 26 vessels participated in the sector, the highest number of vessels to date.<sup>1</sup> Many of these vessels are not from the region.

In addition to increasing numbers of nonlocal boats, the rise of 'Super 8' vessels within the sector has led to growing disparities and unfair competition within the sector that has detrimental effects on our local vessels and communities. Local boats are being outpaced and outcompeted by Super 8s that are larger and more powerful due to 'non-traditional' efficiency improvements in power, capacity, and vessel width (see Figure 1). Changes in vessel capacity and power are contributing to an increasingly shorter fishing season. In 2008, the Federal BSAI cod season for the Under 60 sector lasted more than 100 days. In 2018, the bulk of the sector allocation was harvested in the first 11 days of the season. For local small boats highly dependent on cod, the season has become too short to make a living. The rise of the Super 8s within the Under 60 sector have come at the expense of Unalaska's small boat fleet, and demonstrates the need to again work within the NPFMC process to ensure opportunity, stability, and protection for Unalaska's small boat fleet.

### **A Path Forward at NPFMC**

UNFA has raised small boat concerns to the NPFMC, and asked for assistance in addressing the inequities and impacts on our small boat fleet. The Council has consistently indicated that the most appropriate time to address these small boat issues is when other management changes to Bering Sea cod fisheries are under consideration.

In 2019, the NPFMC initiated discussion on the potential rationalization of the BSAI Trawl CV Sector.<sup>2</sup> This action will impact the Under 60 sector, in part because the Under 60 sector is dependent on rollovers from the

<sup>1</sup> See NPFMC 2019. D2 Discussion Paper: Bering Sea/Aleutian Islands Pacific Cod Limited Access Privilege Program Scoping Paper for the Trawl Catcher Vessel Sector and Pot Catcher Vessels  $\geq$  60 feet. p. 66

<sup>2</sup> The Council also initiated discussion on the potential rationalization of the Over 60 Pot Catcher Vessels Sector, but that action is not moving forward at this time.

under MSA provisions described above, and would be required to comply with the provisions of that section. The CFA would determine how to distribute the allocation according to criteria consistent with the CFA's goals and objectives, which will be approved by the Council and set in federal regulation. Annual reporting to the Council would be required.

The intent of a CFA is to ensure that small boat fishing opportunity in rural Bering Sea fishing communities is protected under a new management plan and that community concerns, including sustained community participation, small-scale fishing opportunity, and entry opportunities are addressed in the initial program design. An initial allocation of Pacific cod quota to a CFA would be anchored to the region and would not be available for purchase by individuals or corporations.

Key elements of a CFA that require careful attention and community input include identifying and refining: community eligibility requirements,<sup>4</sup> options to fund a community allocation, CFA governance and administration (i.e. board composition and functions), quota leasing and distribution processes, including lease rates and eligibility, and reporting requirements. UNFA has developed a draft framework that provides more detail on how a CFA might be function and welcomes input as we move forward.

#### **Next Steps: Securing Unalaska's Small Boat Future**

For more than a century, Unalaska's small boat fleet has depended on viable access to Bering Sea Pacific cod fisheries for economic livelihood and cultural survival. As always, UNFA's intent today is to provide stability and opportunity for Unalaska's small boat fleet. Preserving local cod fishing opportunity is preserving our cultural heritage. The rationalization of the BSAI Trawl CV sector is on the agenda for the December NPFMC meeting in Anchorage, and represents an important opportunity to advance our efforts. We appreciate your support in helping to preserve access for our region's future small boat fishermen.

For questions or comments please contact:

Dustan Dickerson

Vice President

Unalaska Native Fishermen's Association

Email: [codfish1408@yahoo.com](mailto:codfish1408@yahoo.com)

Phone: (907) 359-3117

---

<sup>4</sup> We envision a CFA serving the needs and interests of Bering Sea communities located within the management area and historically dependent on access to Pacific cod. These criteria would allow small boat fishermen from Unalaska and Akutan to lease quota from the CFA.

CITY OF UNALASKA

P. O. BOX 610  
UNALASKA, ALASKA 99685-0610  
(907) 581-1251 FAX (907) 581-1417



May 26, 2021

Simon Kinneen, Chairman  
North Pacific Fisheries Management Council  
1007 W 3rd Avenue, Suite 400  
Anchorage, Alaska 99501

RE: D-1 BSAI Pacific Cod Small Boat Access

Chairman Kinneen:

The City of Unalaska is writing in support of continued analysis of Option 2 in the discussion paper for consideration at the June meeting by the Council. We feel this option which would develop a new fishing sector that would combine the less than 57' or smaller, Hook and Line (HAL), Pot CV, and Jig sectors to fish the 2.0 percent jig allocation.

Mr. Chairman, as you are aware, the City of Unalaska and the Unalaska Native Fishermen's Association have provided written and the verbal testimony of our concerns for years about the ongoing race for fish within the overcapitalized < 60' fishing fleet. Combined with the continued decline in cod allocations and shorter fishing seasons, the economic viability of the cod fishery, of which the Unalaska's small boat is fleet heavily dependent upon, is threatened.

The analysis under Option 2 appears to us to address the concerns of the small vessels that are facing increased competition in the <60' Pacific Pot Cod fishery. In 1994, the NPFMC supported a request from UNFA for a 1.4% Pacific cod jig allocation to be used by the region's local small-boat vessels to provide additional participation in the region's Pacific cod fishery. It seems reasonable that the jig allocation could be developed under this new sector that could assist the smaller HAL, Pot CV, and would continue to provide a jig allocation. I believe the further analysis on how this allocation from the Jig sector would be broken out would 100% go to the <57' HAL, Pot CV, and Jig allocation, or would a portion go to the <60' HAL, Pot CV, and Jig vessels. I believe rollover provisions would need to be looked at. I would assume rollovers would be made to the <60' HAL, Pot CV first.

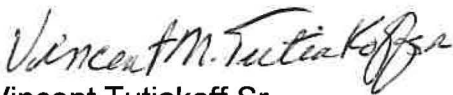
Letter to Chairman Simon Kinneen  
North Pacific Fishery Management Council  
Page 2

Looking at trimester allocation within the jig allocation, I believe it could stay as is, with the HAL, Pot CV fishing the A and C season, and the Jig sector working the B season during the summer, which they traditionally do. As of May 15, there have been no jig landings made so far this fishing year. Leaving the trimester season could also assist with any sea lion concerns.

In closing, the City of Unalaska supports further analysis of Option 2. This option appears to be the only option to address the City of Unalaska concerns in a timely manner. The main objectives of the City of Unalaska are continuing to protect fishing opportunities for local vessels in BSAI Pacific's cod fisheries. Continued support for fishing opportunities for the community members, and to minimize the economic impact of an overcapitalized fishery facing a further reduction in fishing time and reduced cod allocations.

We thank the North Pacific Fishery Management Council for considering the City of Unalaska comments on D-1 BSAI Small Boat Access.

Sincerely,



Vincent Tutiakoff Sr.

Mayor

City of Unalaska

CC: City Manager Erin Reinders,  
Unalaska City Council Members

CITY OF UNALASKA  
UNALASKA, ALASKA

RESOLUTION 2019-55

A RESOLUTION OF THE UNALASKA CITY COUNCIL SUPPORTING THE DEVELOPMENT OF THE BERING SEA ALEUTIAN ISLAND PACIFIC COD LIMITED ACCESS PRIVILEGE PROGRAM (LAPP) FOR THE TRAWL CATCHER VESSEL SECTOR AND  $\geq 60'$  POT CATCHER VESSELS

WHEREAS, the City of Unalaska benefits from the rich fishery resources of the Bering Sea and Aleutian Islands; and

WHEREAS, for the past 24 years, Unalaska's Port of Dutch Harbor has been the nation's number one commercial fishing port in terms of quantity of the catch, and second during that time frame in the value of the catch; and

WHEREAS, commercial fishing in the Bering Sea and Aleutian Islands is Unalaska's only industry, and is the economic engine that drives this area; and

WHEREAS, the commercial fishing industry of Unalaska has been negatively impacted by a reduction in the total allowable catch of Pacific Cod, which has been reduced 30% over the past three years, and at the same time, there are more harvesters participating in this unrationalized fishery; and

WHEREAS, the Pacific Cod fishery is the second most important and valuable groundfish species processed in Unalaska, after the Bering Sea Pollock fishery; and

WHEREAS, the continued race for fish in these two Pacific Cod sectors results in compressed fishing seasons, negative economic impacts, decreased ability to maximize the value of the fishery and discourages fishing practices that minimize bycatch; and

WHEREAS, without the development of a cooperative program for these fishing sectors, we will continue to see negative impacts on harvesters, processors, support sector businesses and the communities of our region; and

WHEREAS, the City of Unalaska will request that the North Pacific Fishery Management Council consider, during LAPP development, an Unalaska Community Pacific Cod Allocation from the unused portion of the Jig allocation, for the Unalaska based  $\leq 60'$  fixed gear vessels; and

WHEREAS, the City of Unalaska believes that a community based Pacific Cod allocation will result in continued participation of the local  $\leq 60'$  fleet in the Pacific Cod fishery, on which they depend for their continued economic viability.

NOW THEREFORE BE IT RESOLVED that the Unalaska City Council supports the development of a Pacific Cod cooperative LAPP that will stop the race for fish, resulting to improved product utilization, reduced bycatch, improved safety, and will be benefit all Pacific Cod harvesters, processors, support sector businesses and the communities of our region.

BE IT FURTHER RESOLVED that the Unalaska City Council supports consideration by the North Pacific Fishery Management Council, during LAPP development, of an Unalaska Community Pacific Cod allocation from the unused portion of the Jig allocation for the Unalaska based  $\leq 60'$  fixed gear vessels.

PASSED AND ADOPTED by a duly constituted quorum of the Unalaska City Council on September 24, 2019.



---

Frank Kelty  
Mayor

ATTEST:



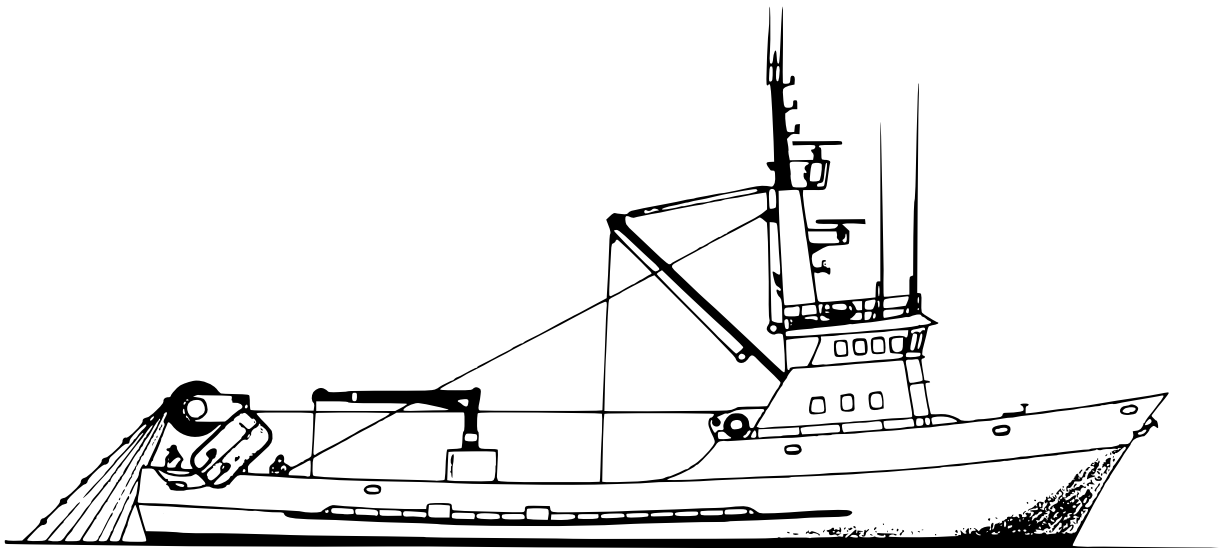
---

Roxanna F. Winters  
Acting City Clerk



**Bering Sea/ Aleutian Islands Pacific Cod  
Limited Access Privilege Program Scoping Paper  
for the Trawl Catcher Vessel Sector and Pot Catcher Vessels  $\geq$  60 feet**

September 2019<sup>1</sup>



---

<sup>1</sup> Prepared by: Jon McCracken (NPFMC), Darrell Brannan (Brannan & Associates), Stephanie Warpinski (NMFS), Sarah Marrinan (NPFMC), Alicia Miller (NMFS), and Joe Krieger (NMFS)

Accessibility of this Document: Effort has been made to make this document accessible to individuals with disabilities and compliant with Section 508 of the Rehabilitation Act. The complexity of this document may make access difficult for some. If you encounter information that you cannot access or use, please call us at [907-271-2809](tel:907-271-2809) so that we may assist you.



## Table of Contents

1	Introduction .....	3
1.1	Staff Tasking for the BSAI Trawl CV Sector.....	3
1.2	Staff Tasking for the BSAI Pot CV $\geq$ 60 Feet Sector.....	4
1.3	Brief Summary of Federal BSAI Pacific Cod Management.....	4
1.3.1	BSAI Pacific Cod Harvest Specifications and Sector Allocations.....	4
1.3.2	License Limitation Program (LLP) Management .....	8
2	MSA Elements of a LAPP .....	10
2.1	Required Elements of a LAPP for BSAI Pacific Cod.....	10
2.2	Discretionary Provisions of LAPPs for BSAI Pacific Cod .....	12
3	Examples of Cooperative Programs .....	14
3.1	American Fisheries Act.....	14
3.2	Amendment 80 .....	15
3.3	BSAI Crab Rationalization Program.....	16
3.4	Central GOA Rockfish Program.....	16
3.5	Pacific Cod Freezer Conservation Cooperative (Voluntary Cooperative) .....	19
3.6	Tabular Summary of Example Cooperative Programs.....	20
4	BSAI Trawl CV Sector LAPP.....	23
4.1	Program Objectives .....	23
4.2	Cooperative Structure.....	24
4.2.1	Voluntary Cooperative.....	24
4.2.2	Cooperative Structure Defined in Regulation .....	25
4.3	Allocation Decisions.....	26
4.3.1	Harvest and Participation Data.....	26
4.3.2	Historical Dependence .....	27
4.3.3	Stacking LLP Licenses.....	31
4.3.4	Pacific Cod Transfers with AFA Cooperatives .....	32
4.4	Seasonal Allocations.....	33
4.5	Processors and Communities Considerations .....	34
4.5.1	Port/Region Activity.....	35
4.5.2	Processor and Community Considerations .....	36
4.5.3	AI Pacific Cod Shoreside Sustainability .....	38
4.6	Ownership and Use Caps .....	41
4.7	Sideboard Limits .....	44
4.7.1	AFA Sideboards.....	44
4.7.2	Non-AFA CV Sideboards .....	46
4.7.3	BSAI Yellowfin Sole .....	48
4.8	Impacts to Captains and Crew.....	49
4.8.1	Captains and Crew Effects Due to LAPP Implementation.....	49
4.8.2	Examples of Captain and Crew Provisions in Other Programs .....	49
4.8.3	Captain and Crew Considerations for the BSAI Pacific Cod Trawl CV Sector .....	51
4.9	Bycatch/PSC Management.....	52
4.9.1	Halibut PSC .....	52
4.9.2	Crab PSC.....	53
4.9.3	PSC Apportionment Issues.....	54
4.9.4	Groundfish Bycatch.....	56
4.10	Management and Enforcement.....	57
4.10.1	Cost Recovery.....	57
4.10.2	Observer Coverage.....	57
4.10.3	Cooperative Reporting Requirements .....	58
4.10.4	Enforcement.....	58
4.10.5	Economic Data Reports .....	59
5	LAPP for BSAI Pot CV $\geq$ 60 ft Sector.....	60
5.1	Background.....	61
5.2	Fishery Participation .....	62
5.3	Sideboard Limits .....	63
6	Impacts of Proposed LAPPs on other Sectors.....	65
7	Conclusions and Next Steps.....	70
8	Bibliography .....	71

## 1 Introduction

The North Pacific Fishery Management Council (Council) has tasked staff with several papers related to Pacific cod management in the Bering Sea and Aleutian Islands (BSAI).<sup>2</sup> This paper is intended to address two of those information requests. The two proposed actions (as more thoroughly described in the next two sections) consider the development of separate Limited Access Privilege Programs (LAPPs) for the trawl catcher vessel (CV) sector and the pot CV sector for vessels greater than or equal to 60 feet in length in the BSAI Pacific cod fishery. While these management programs may develop separately if the Council continues to consider action for both sectors, the proposals for both sectors are included in this paper because much of the general information on LAPPs and cooperative formation would apply to both sectors. Participation information is provided for each fishery in separate chapters.

This scoping paper, in conjunction with stakeholder input, is intended to provide information that would allow the Council to develop alternatives and options to address its purpose and need statement. The scoping document begins with an explanation of the Council's request related to each sector and a brief description of Federal BSAI Pacific cod management. The key sections that follow include a discussion of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) Section 303A LAPP elements that must be included/considered in a LAPP that can be approved by the Council and Secretary of Commerce (SOC), a summary of elements and characteristics of other cooperative programs in the North Pacific for reference, and questions and context related to the BSAI Pacific cod trawl CV and pot CV sectors specifically, that will be necessary in considering the elements of a LAPP.

### 1.1 Staff Tasking for the BSAI Trawl CV Sector

The Council tasked staff at its February 2019 meeting with developing a scoping paper that considers methods to rationalize the BSAI Pacific cod trawl CV fishery.<sup>3</sup> The Council requested a scoping document instead of a discussion paper because it felt a scoping document indicates that the issue is further along than the discussion paper stage. The Council also stated that a scoping paper signals that the Council has a greater intent to move forward on the issue. At the same time the Council approved development of the scoping document, it encouraged stake holders to begin a parallel process of working to develop approaches to rationalize the BSAI Pacific cod trawl CV fishery that address their concerns.

Specifically, the Council requested that staff address the following issues so they could be incorporated into a comprehensive BSAI cod trawl CV management program:

- allocation of BSAI Pacific cod quota share to BSAI LLP licenses;
- establishing trawl CV cooperative(s) for Pacific cod;
- recognition of historical American Fisheries Act (AFA) cooperative-based cod harvest arrangements since the implementation of pollock cooperatives under the AFA;
- recognition of historical harvest of AFA cod exempt boats;
- recognition of historical harvest of non-AFA boats;
- protections for harvesters, processors, and communities;
- use caps, transfer requirements, and other administrative requirements that apply to quota programs;

---

<sup>2</sup> See a Staff Tasking Action Memo from the June 2019 Council meeting for a list of these current BSAI Pacific cod actions.

<sup>3</sup> <https://meetings.npfmc.org/CommentReview/DownloadFile?p=68547653-a558-4b6e-8318-70444670bca5.pdf&fileName=C4%20MOTION%20BSAI%20Pcod%20Trawl%20CV%20Scoping%20Document.pdf>

- establishing sideboard limits to protect limited access Gulf of Alaska (GOA) and BSAI fisheries;
- consideration of management changes on CV crew; and
- implications for bycatch management, including halibut savings to benefit the health of halibut resource.

### **Council's Purpose and Need Statement**

*Over the last several years, total allowable catch for Pacific cod in the Bering Sea-Aleutian Island has steadily decreased. At the same time, the number of LLP licenses used by trawl CVs to participate in the BSAI non-CDQ trawl Pacific cod fishery has increased. The pace of the fishery has contributed to an increasingly compressed season, resulting in decreased ability to maximize the value of the fishery and negatively impacting all fishery participants (CVs, motherships, shoreside processors, and communities). This race for fish also discourages fishing practices that can minimize bycatch. The potential for continued re-entry of additional entrants could exacerbate these unfavorable conditions and threaten the sustained viability of the fishery. The Council is considering the development of management tools to improve the prosecution of the fishery, including the development of a cooperative-based program, with the intent of promoting safety and increasing the value of the fishery.*

The Council also established a control date of February 7<sup>th</sup>, 2019 that may be used as reference for any future management action to address trawl catcher vessel participation in the BSAI Pacific cod fishery.

#### **1.2 Staff Tasking for the BSAI Pot CV $\geq$ 60 Feet Sector**

During its February 2019 meeting the Council also requested a discussion paper specific to the BSAI Pacific cod Pot CV sector using vessels greater than or equal to 60 feet.<sup>4</sup> That request was more general and requested that staff initiate a discussion paper to consider some form of rationalization or cooperative management structure for the BSAI Pacific cod pot CV sector greater than or equal to 60 feet in length overall. Data presented for this fishery is provided in Section 5 of this paper. The information included provides context for how this proposed action could change the management of the Pacific cod trawl CV and pot CV  $\geq$  60 ft sectors, and any downstream effects this may have on other sectors.

#### **1.3 Brief Summary of Federal BSAI Pacific Cod Management**

The following section includes a brief description of the management of the Pacific cod fishery in the BSAI, including an overview of the process of establishing catch limits and sector allocations, seasonal apportionments for non-CDQ sectors, and the Federal licensing requirements for participation.

##### **1.3.1 BSAI Pacific Cod Harvest Specifications and Sector Allocations**

The process for establishing Pacific cod catch limits and sector allocations is illustrated in Figure 1-1. Each year, the Council's BSAI groundfish plan team and Scientific and Statistical Committee (SSC) establish an overfishing level (OFL) and acceptable biological catch (ABC) for Pacific cod for the Bering Sea (BS) subarea of the BSAI, and a separate OFL and ABC for the Aleutian Islands (AI) subarea of the BSAI. Before the AI and BS Pacific cod total allowable catches (TACs) are established at a lower level, the Council and NMFS consider social and economic factors, and management uncertainty, as well as two factors that are particularly relevant to BSAI Pacific cod: 1) Pacific cod guideline harvest level (GHL)

---

<sup>4</sup> <https://meetings.npfmc.org/CommentReview/DownloadFile?p=e5ee738f-fed5-4352-b43b-072a511fff8d.pdf&fileName=E%20COUNCIL%20MOTION%20on%20Pot%20CV%20Cod.pdf>

fisheries that occur in the State waters of the BSAI, and 2) an overall 2 million mt limit on the maximum amount of TAC that can be specified for all BSAI groundfish.

Pacific cod TACs are specified at reduced levels that take into account the GHL fisheries<sup>5</sup> so that the combined harvest limits from GHL fisheries and the TACs do not exceed the ABCs specified for the BS or AI. The State manages three GHL fisheries for Pacific cod<sup>6</sup>, two that occur within State waters in the BS and one that occurs within State waters in the AI. Under current State regulations in the BS, the Dutch Harbor Subarea (DHS) GHL fishery for pot gear in the BS is set at 8 percent of the BS ABC with an annual 1 percent increase in that GHL allocation if 90 percent of the GHL allocation is harvested, until it reaches 15 percent of the BS ABC. A second BS GHL fishery began in 2019 allocating approximately 45 mt (10,000 lbs.) to the jig sector in the DHS. In the AI, the GHL fishery was set at 27 percent of the 2018 ABC specified for AI Pacific cod, with annual “step-up” provisions that would increase the amount of the GHL fishery if it was harvested up to at least 90 percent in the previous year. The 2019 AI GHL was increased to 31 percent of the AI Pacific cod ABC. If the GHL fishery continues to be nearly fully harvested it can continue to increase annually by 4 percent up to a maximum of 39 percent of the AI ABC or to a maximum of 6,804 mt (15 million lbs.), whichever is less. Allowable gear in the AI GHL fisheries include trawl, longline, pot, and jig gear.

Once the individual AI and BS TACs are established, regulations at § 679.20(a)(7)(i) allocate 10.7 percent of the BS and AI Pacific cod TAC to the CDQ Program. The remaining portion of TAC, after deducting the 10.7 percent allocation for CDQ Program, is the initial total allowable catch (ITAC).

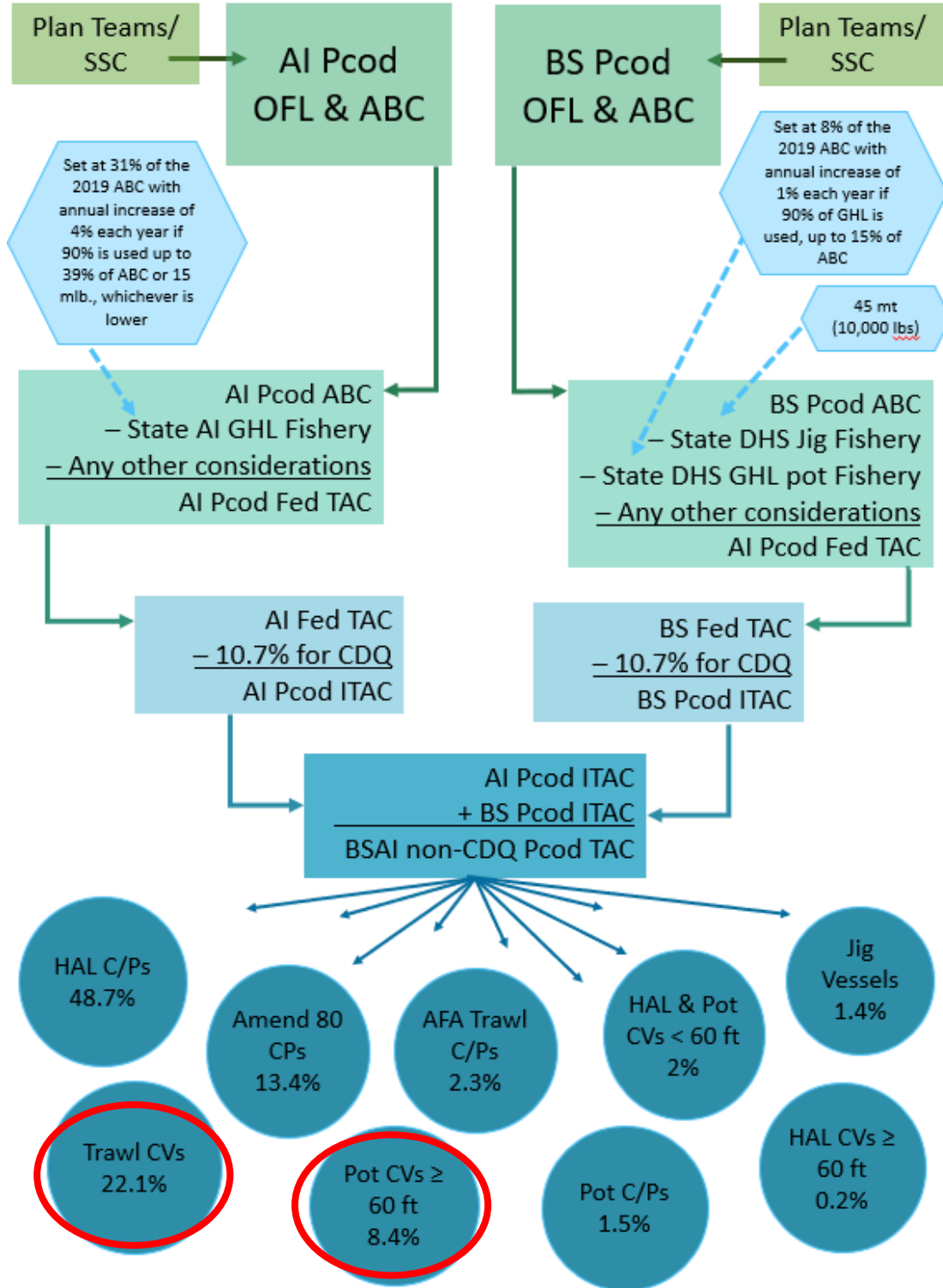
After subtraction of the CDQ allocation from each TAC, NMFS combines the remaining BS and AI ITACs into one BSAI non-CDQ TAC, which is available for harvest by nine non-CDQ fishery sectors. Regulations implemented under BSAI Amendment 85 at § 679.20(a)(7)(ii)(A) define the nine Pacific cod non-CDQ fishery sectors in the BSAI and specify the percentage allocated to each. The non-CDQ fishery sectors are defined by a combination of gear type (e.g., trawl, hook-and-line), operation type (i.e., catcher vessel or catcher/processor), and vessel size categories (e.g., vessels  $\geq$  to 60 ft in length overall). Through the annual harvest specifications process, NMFS allocates an amount of the combined BSAI non-CDQ TAC to each of these nine non-CDQ fishery sectors. The nine non-CDQ fishery sectors and the percentage of the combined BSAI non-CDQ TAC allocated to each sector are shown in Figure 1-1 below.

---

<sup>5</sup> <http://www.adfg.alaska.gov/FedAidPDFs/FMR18-18.pdf>

<sup>6</sup> <http://www.adfg.alaska.gov/index.cfm?adfg=commercialbyareaaleutianislands.groundfish>

Figure 1-1 BSAI Pacific cod specifications and sector allocations



Notes: SSC= Scientific and Statistical Committee, AI= Aleutian Islands, BS= Bering Sea, Pcod= Pacific cod, OFL= overfishing limit, ABC= acceptable biological catch, GHL= guideline harvest limit, DHS = Dutch Harbor Subarea, TAC= total allowable catch, ITAC= initial total allowable catch, CDQ= community development quota, HAL= hook-and-line, CV= catcher vessel, C/P= catcher processor, AFA= American Fisheries Act, Amend 80= Amendment 80

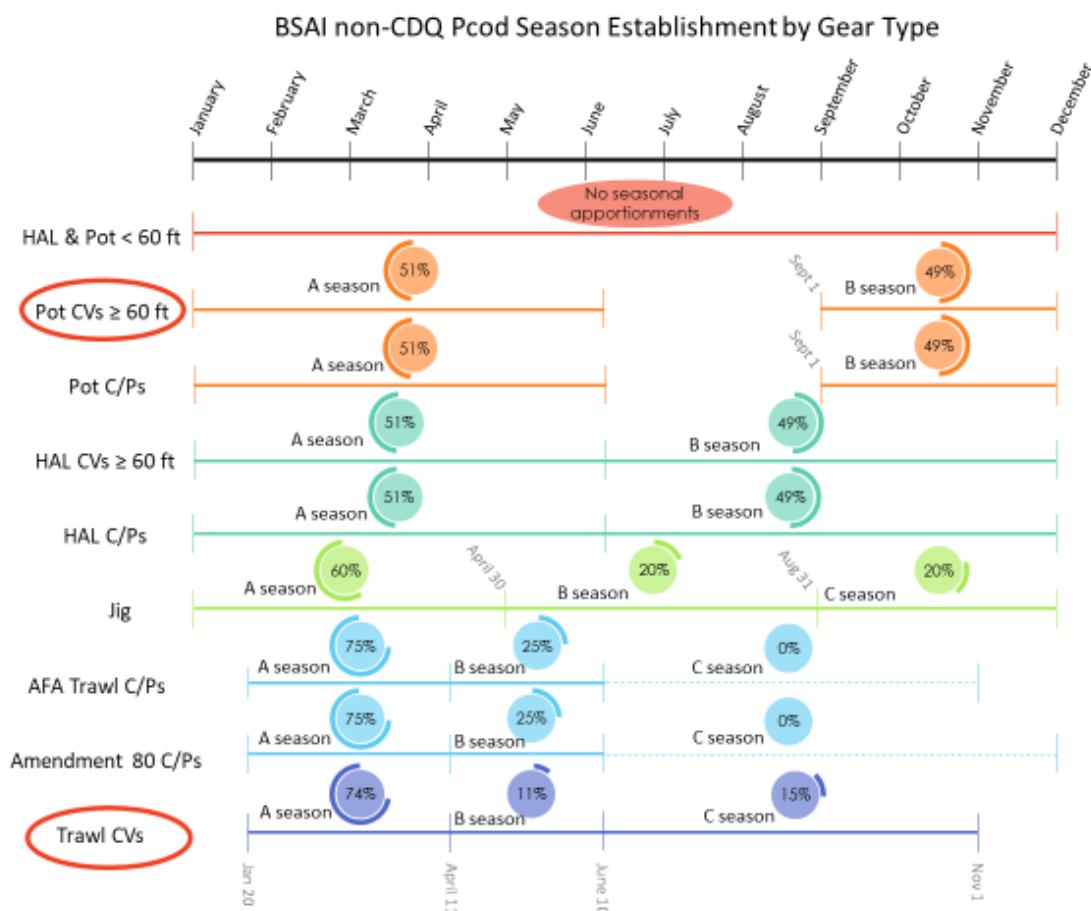
NMFS manages each of the non-CDQ fishery sectors to ensure harvest of Pacific cod does not exceed the overall annual allocation made to each of the non-CDQ fishery sectors. NMFS monitors harvests that occur while vessels are directed fishing for Pacific cod (specifically targeting and retaining Pacific cod above specific threshold levels) and harvests that occur while vessels are directed fishing in other fisheries and incidentally catching Pacific cod (e.g., the incidental catch of Pacific cod in the pollock directed fishery). NMFS allocates exclusive harvest privileges to the non-AFA trawl catcher/processor sector, or the Amendment 80 sector, that is prohibited from being exceeded. For the other eight non-CDQ fishery sectors, NMFS carefully tracks both directed and incidental catch of Pacific cod. NMFS takes appropriate management measures, such as closing directed fishing for a non-CDQ fishery sector, to ensure that total directed fishing and incidental fishing harvests do not exceed that sector's allocation.

An allocation to a non-CDQ fishery sector may be harvested in either the BS or the AI, subject to the non-CDQ Pacific cod TAC specified for the BS or the AI. If the non-CDQ Pacific cod TAC is or will be reached in either the BS or AI, NMFS will prohibit directed fishing for Pacific cod in that subarea for all non-CDQ fishery sectors. The other area will remain open to directed fishing for all sectors as long as Pacific cod TAC is available in that area and the sector has Pacific cod available from their BSAI allocation.

Allocations of Pacific cod to the CDQ Program and to the non-CDQ fishery sectors are further apportioned by seasons. Figure 1-2 demonstrates how those seasons vary by non-CDQ sector. Seasonal apportionments for the trawl CV sector and pot CV vessels  $\geq 60$  ft LOA are further discussed in Section 4.4 and Section 5.1, respectively.

The allocation of Pacific cod among the CDQ Program and the nine non-CDQ fishery sectors, as well as the seasonal apportionment of those allocations, create a large number of separate sector seasonal allocations. To help ensure the efficient allocation management, NMFS may rollover any unused portion of a seasonal apportionment from any non-CDQ fishery sector (except the jig sector) to that sector's next season during the current fishing year.

Figure 1-2 BSAI non-CDQ Pacific cod seasonal apportionments by gear type



Note: HAL= hook-and-line, CV= catcher vessel, C/P= catcher processor, AFA= American Fisheries Act

### 1.3.2 License Limitation Program (LLP) Management

As of January 1, 2000, a Federal LLP license has been required for vessels engaged in directed fishing for LLP groundfish species in the BSAI or Gulf of Alaska (GOA) in Federal fisheries.<sup>7</sup> LLP licenses come with a combination of endorsements that specifies the type of participation the LLP license is authorized. In order to harvest Pacific cod in a BS or AI Federal fishery (including CDQ and non-CDQ) a vessel must hold a valid groundfish LLP license which includes the appropriate maximum length overall (MLOA) for the vessel using the license and the appropriate endorsements. More specifically, the LLP license specifies:

- An endorsement(s) for the sub-area(s) that vessel is authorized to fish (e.g., BS or AI or both)
- An endorsement for mode of operation (i.e. catcher vessel or catcher/processor). Vessels with a CV license may harvest, but not process fish onboard. Vessels with a C/P endorsed license

<sup>7</sup> There are a few exceptions for the BSAI including vessels that do not exceed 32 ft LOA, vessels that are at least 32 ft LOA but that do not exceed 46 ft LOA that are registered with their CDQ group to harvest CDQ groundfish, vessels that do not exceed 60 ft LOA and are using jig gear (but no more than 5 jig machines, one line per machine, and 15 hooks per line), and certain vessels constructed for and used exclusively in the CDQ fisheries.

may harvest and process fish onboard. A vessel with a C/P LLP license may deliver unprocessed catch as well.

- An endorsement for trawl, non-trawl, or both types of fishing.
- If the vessel's LLP license has a trawl endorsement, that vessel is also automatically authorized for directed fishing for Pacific cod.
- If the LLP license is non-trawl, the license will also specify whether the vessel has a Pacific cod endorsement (authorizing directed fishing for Pacific cod) and with which gear (hook-and-line or pot gear).
- The LLP groundfish licenses also identify whether the LLP license is associated with the Amendment 80, AFA, and GOA Rockfish Program.
- LLP groundfish licenses also specify whether use of the license is sideboarded in other fisheries (this is discussed more extensively in Section 4.7)

These different types of endorsements create 14 different combinations of LLP licenses that authorize Pacific cod fishing in the BS or AI (Table 1-1). Among those 14 combinations of licenses, some include multiple endorsements. For example, one LLP license is endorsed for both AI trawl CV fishing (which includes the ability for directed fishing for Pacific cod), as well as being authorized as a HAL CV in the AI fishing for Pacific cod. Table 1-1 demonstrates the number of LLP licenses for each category as well as this overlap for license that hold multiple endorsements. This table shows that in 2018, there were a total of 114 LLP licenses with CV trawl endorsements for the BS. Of the 43 LLP licenses with CV trawl endorsement for the AI, 42 of them were also authorized to fish in the BS; demonstrating significant overlap. In addition to overlap in the AI, there is also significant overlap in the LLP licenses with CV trawl endorsement for the BS and those that are AFA derived (98 of the 114 licenses). An Amendment 80 flag is attached to some of the C/P endorsements, such as the AI and BS trawl C/P fisheries. Most of the LLP licenses that are endorsed for CV pot fishing for Pacific cod do not have other endorsements.

**Table 1-1 Number of LLP licenses issued in the BSAI by endorsement, 2018**

Sector	Sum of AI_C/P_PCOD_HAL2	Sum of BS_C/P_PCOD_HAL2	Sum of AI_C/P_PCOD_POT2	Sum of BS_C/P_PCOD_POT2	Sum of AI_CV_PCOD_HAL2	Sum of BS_CV_PCOD_HAL2	Sum of AI_CV_PCOD_POT2	Sum of BS_CV_PCOD_POT2	Sum of AI_TRAWL_C/P2	Sum of BS_TRAWL_C/P2	Sum of AI_TRAWL_CV2	Sum of BS_TRAWL_CV2	Sum of A802	Sum of AFA
AI_C/P_PCOD_HAL	34													
BS_C/P_PCOD_HAL	34	36												
AI_C/P_PCOD_POT	3	3	5											
BS_C/P_PCOD_POT	3	3	5	8										
AI_CV_PCOD_HAL	0	0	1	1	8									
BS_CV_PCOD_HAL	0	0	1	1	7	8								
AI_CV_PCOD_POT	0	0	0	0	0	0	3							
BS_CV_PCOD_POT	0	0	0	0	0	1	2	49						
AI_TRAWL_C/P	0	0	0	0	0	0	0	0	50					
BS_TRAWL_C/P	0	0	0	0	0	0	0	0	49	58				
AI_TRAWL_CV	0	0	0	0	1	0	0	0	0	0	43			
BS_TRAWL_CV	0	0	0	0	0	0	0	0	0	0	42	114		
A80	0	0	0	0	0	0	0	0	19	26	0	0	26	
AFA	0	0	0	0	0	0	0	0	25	27	42	98	0	128

Source: BSAI Pacific cod allocation review {LLPs (4-29-1)}



## 2 MSA Elements of a LAPP

When the Council considers development of a LAPP to harvest fish there are both required and discretionary program elements. Section 303A of the MSA defines the required program elements and also provides guidance on discretionary elements of a LAPP.

Any LAPP to harvest fish is considered a permit for the purposes of sections 307 (Prohibited Acts), 308 (Civil Penalties and Permit Sanctions), and 309 (Criminal Offenses). The LAPP permit may be revoked, limited, or modified at any time as allowed by the MSA. Those permits do not confer any right of compensation to the holder of a LAPP privilege. They do not create any right, title, or interest to any fish before the fish is harvested by the holder. A LAPP permit is considered a grant of permission to the holder of the LAPP to engage in activities permitted by the LAPP.

A LAPP permit may only be issued to a United States citizen, a permanent resident alien, or a corporation, partnership, or other entity established under the laws of the United States or any State as long as it meets the eligibility and participation requirements established in the program. Entities other than those described above are prohibited from acquiring a privilege to harvest fish through transfer. They are also prohibited from acquiring LAPP permits by realizing a security interest.

### 2.1 Required Elements of a LAPP for BSAI Pacific Cod

Section 303A(c) of the MSA defines the required elements of a Council developed LAPP. A summary of that section is provided in this section when it applies to the BSAI Pacific cod fishery to assist the Council in development of the trawl CV and pot CV  $\geq 60$  ft LAPPs. Some items are excluded when they do not apply. For example, if a fishery is overfished or subject to a rebuilding plan, the LAPP must be structured to assist in the rebuilding plan. Because the BSAI Pacific cod fishery is not overfished or subject to a rebuilding plan, that required provision is not discussed in this section as a required element the Council must consider. The required elements that the Council must address are provided below.

1. If the Council or Secretary determine the fishery has over-capacity, the LAPP must contribute to reducing capacity in the fishery. Under the cooperative programs considered this would be achieved by allowing the cooperatives to determine how to rationally and efficiently harvest the BSAI Pacific cod available to its members.
2. A LAPP must promote fishing safety, fishery conservation and management, and social and economic benefits.
3. A LAPP must require that all fish harvested under the program be processed on vessels of the United States or on United States soil (including any territory of the United States). However, the Secretary may waive this requirement if he/she determines that the fishery has historically processed the fish outside of the United States; and the United States has a seafood safety equivalency agreement with the country where processing will occur. While the waiver is included in the MSA, it does not apply for the BSAI Pacific cod fishery.
4. The goals of the program must be specified. These are typically defined in the Council's Purpose and Need Statement that is developed for the program.
5. The program must include provisions for the regular monitoring and review by the Council and the Secretary of the operations of the program:
  - a. including determining progress in meeting the Program's goals,
  - b. meeting the goals of the MSA, and

- c. any necessary modification of the program to meet those goals, with a formal and detailed review 5 years after the implementation of the program and after the 5-year review the Council must review the Program no less frequently than once every 7 years.
6. The LAPP must include an effective system for enforcement, monitoring, and management of the program, including the use of observers or electronic monitoring systems.
7. The program must include an appeals process for administrative review of the Secretary's decisions regarding initial allocation of limited access privileges. When the National Marine Fisheries Service (NMFS) Restricted Access Management (RAM) issues an initial administrative determination (IAD) on behalf of the Regional Administrator to determine the initial allocation, the potential LAPP permit holder would be able to file an appeal. To fulfill that requirement, NMFS adopted a rule (79 FR 7056, February 6, 2014) at 15 CFR part 906, which designates the National Appeals Office (NAO), a division within NMFS Office of Management and Budget, as adjudicator for appeals in future LAPPs established under section 303A of the MSA. NAO adjudicates IADs, agency actions that directly and adversely affect an appellant. Although not exclusively, NAO proceedings are for appeals of denials of permits or other limited access privileges.
8. The program must provide for the establishment by the Secretary, in consultation with appropriate Federal agencies, an information collection and review process to provide any additional information needed to determine whether any illegal acts of anti-competition, anti-trust, price collusion, or price fixing have occurred among regional fishery associations or persons receiving limited access privileges under the program.
9. Provide for the revocation by the Secretary of limited access privileges held by any person found to have violated the antitrust laws of the United States.
10. The Council must establish a policy and criteria for the transferability of LAPP privileges (through sale or lease), that is consistent with the policies adopted by the Council for the fishery and establish, in coordination with the Secretary, a process for monitoring of transfers (including sales and leases) of limited access privileges.
11. Implementation of a LAPP does not modify, impair, or supersede the operation of any of the antitrust laws. The term 'antitrust laws' as defined in subsection (a) of the first section of the Clayton Act, except that such term includes section 5 of the Federal Trade Commission Act to the extent that such section 5 applies to unfair methods of competition.
12. LAPPs must include the means to identify and assess the management, data collection and analysis, and enforcement programs costs that are directly related to and in support of the program. Up to 3 percent of the exvessel value of the quota share (QS) species allocated under the LAPP must be paid to NMFS by LAPP privilege holders to cover the costs of management, data collection and analysis, and enforcement activities.
13. A LAPP permit is a permit issued for a period of not more than 10 years that:
  - a. will be renewed before the end of that period, unless it has been revoked, limited, or modified;
  - b. will be revoked, limited, or modified if the holder is found by the Secretary, after notice and an opportunity for a hearing under section 554 of title 5, United States Code, to have failed to comply with any term of the plan identified in the plan as cause for revocation,

limitation, or modification of a permit, which may include conservation requirements established under the plan;

- c. may be revoked, limited, or modified if the holder is found by the Secretary, after notice and an opportunity for a hearing under section 554 of title 5, United States Code, to have committed an act prohibited by section 307 of the MSA; and
- d. may be acquired, or reacquired, by participants in the program under a mechanism established by the Council if it has been revoked, limited, or modified.

### ***Allocation***

Section 303A(c)(5) defines the allocation criteria under a LAPP. The Council is required to establish procedures to ensure fair and equitable initial allocations. In making those determinations the Council must consider:

- 1. current and historical harvests;
- 2. employment in the harvesting and processing sectors;
- 3. investments in, and dependence upon, the fishery; and
- 4. the current and historical participation of fishing communities;

The Council must also consider the basic cultural and social framework of the fishery. As part of that consideration it should focus on the development of policies to promote the sustained participation of small owner-operated fishing vessels and fishing communities that depend on the fisheries, including regional or port-specific landing or delivery requirements.

The Council may also include measures to assist entry-level and small vessel owner-operators, captains, crew, and fishing communities through set-asides of harvesting allocations, including providing privileges, which may include set-asides or allocations of harvesting privileges, or economic assistance in the purchase of limited access privileges

### ***Excessive Consolidation***

The Council must also consider excessive consolidation in the harvesting and processing sectors to ensure that LAPP permit holders do not acquire an excessive share in the program by:

- 1. establishing a maximum share, expressed as a percentage of the total limited access privileges, that a limited access privilege holder is permitted to hold, acquire, or use; and
- 2. establishing any other limitations or measures necessary to prevent an inequitable concentration of limited access privileges.

## **2.2 Discretionary Provisions of LAPPs for BSAI Pacific Cod**

The Council may also consider LAPP provisions for fishing communities. Any fishing privileges that may be granted under a BSAI Pacific cod LAPP that are specific to Fishing Communities will require that the fishing community be eligible to participate in a LAPP to harvest fish under the Council's program by

- a. being located within the management area of the Council;

- b. meeting criteria developed by the Council, approved by the Secretary, and published in the Federal Register;
- c. consisting of residents who conduct commercial or recreational fishing, processing, or fishery-dependent support businesses within the Council's management area; and
- d. developing and submitting a community sustainability plan to the Council and the Secretary that demonstrates how the plan will address the social and economic development needs of coastal communities, including those that have not historically had the resources to participate in the fishery, for approval based on criteria developed by the Council that have been approved by the Secretary and published in the Federal Register.

When developing participation criteria for eligible communities the Council must consider traditional fishing or processing practices in, and dependence on, the fishery, including:

- a. the cultural and social framework relevant to the fishery;
- b. economic barriers to access to fishery;
- c. the existence and severity of projected economic and social impacts associated with implementation of the LAPP on harvesters, captains, crew, processors, and other businesses substantially dependent upon the fishery in the region or sub-region;
- d. the expected effectiveness, operational transparency, and equitability of the community sustainability plan; and
- e. the potential for improving economic conditions in remote coastal communities lacking resources to participate in harvesting or processing activities in the fishery.

Failure to comply with the Program will result in the Secretary denying or revoking LAPP privileges for any person who fails to comply with the requirements of the community sustainability plan. Any limited access privileges denied or revoked under this section may be reallocated to other eligible members of the fishing community.

The Council could also allow for the implementation of Regional Fishery Associations (RFAs). These entities are defined at Section 303A(c)(4). RFAs are allowed to acquire and hold LAPP QS and permits but must not be eligible for an initial allocation of those harvest privileges. Additional information on RFAs is not provided at this time. If the Council wishes to pursue RFAs as part of a LAPP program, additional information would be provided in the future.

The Council may authorize LAPP permits to harvest fish to be held, acquired, used by, or issued under the system to persons who substantially participate in the fishery, including in a specific sector of such fishery, as specified by the Council. In other words, the Council could choose to designate QS for use by specific sectors. For example, AFA and non-AFA, Amendment 80 and non-Amendment 80, mothership and inshore AI and BS, etc.

The Council may also initiate a Limited Access Privilege Assisted Purchase Program as part of the LAPP. The program allows reserves up to 25 percent of any fees collected from a fishery under section 304(d)(2) to be used as an aid in financing the purchase of LAPP privileges in that fishery by fishermen who fish from small vessels and first-time purchase of LAPP privileges in that fishery by entry level fishermen. The Council would be required to recommend criteria that a fisherman must meet to qualify for funding under this provision.

When establishing a LAPP, the Council must consider, but is not required to implement, an auction system or other program to collect royalties for the initial, or any subsequent, distribution of allocations in a LAPP. If that type of program was implemented, revenues generated must be deposited in the Limited Access System Administration Fund.

A summary paper on the design and use of LAPPs was also developed by NMFS (Anderson & Holliday, 2007). The reader is referred to that paper for additional information on issues like shifts in market power, the theory of market-based management techniques, non-history-based allocation methods, etc.

### **3 Examples of Cooperative Programs**

There are various types of LAPPs in use throughout the United States and the World. In part because of the increase in use of fishing cooperatives as a management tool, there is an ever-increasing number of academic papers devoted to fishing cooperatives. Deacon (2019) provides a somewhat detailed bibliography of recent and past works. A brief description of the cooperative programs in the North Pacific are presented in the following sections with a summary table (Table 3-2) following. Understanding the context for the development of these programs as well as the resulting design can help the Council in its consideration of new LAPPs for the BSAI Pacific cod trawl CV and the sector of pot CVs  $\geq 60$  ft.

#### **3.1 American Fisheries Act**

The AFA was developed by Congress and signed into law October 1998. The purpose of the AFA was to tighten U.S. ownership standards for U.S. fishing vessels 100 ft and greater and to address inshore versus offshore allocation disputes that were creating a race for fish within and between sectors. The AFA set allocations and provided for the formation of cooperatives.

The AFA specifies the allocation of the BS pollock TAC for three AFA sectors, after first deducting 10 percent of the BS pollock for the CDQ Program, and a variable amount as an incidental catch allowance for BS pollock taken in other fisheries. The BS pollock directed fishing allowance (DFA) is divided among the inshore sector (50 percent), C/P sector (40 percent), and mothership sector (10 percent). Catch history within each sector was assigned to harvesting vessels using years defined by Congress.

For the offshore sector, the AFA specifies eligible vessels by name. This includes 20 C/Ps that are eligible to participate in the C/P sector. Additionally, the Act lists seven CVs eligible to participate as harvesters in the C/P sector based on their historical participation in the C/P sector. A minimum of 8.5 percent of the C/P sector allocation is available for harvest only by these seven CVs. The AFA further specifies three motherships that are eligible to process the mothership allocation under the AFA and lists 19 CVs which are eligible to fish and deliver that sector's allocation.

For the inshore sector, the AFA does not list the eligible shoreside processors, stationary floating processors, and CVs by name; rather, it stipulates the landing/processing history necessary for eligibility. CVs qualified to harvest a portion of the inshore directed fishing allowance are required to deliver to a qualified inshore processor. Eight inshore processors met the AFA eligibility criteria to participate in the inshore sector, of which six are shoreside processors—UniSea Seafoods, Westward Seafoods, and Alyeska Seafoods in Unalaska/Dutch Harbor; Trident Seafoods in Akutan, Trident Seafoods in Sand Point, and Peter Pan Seafoods in King Cove. The Council is allowed to add qualified processors only if the BSAI TAC increases to at least 110 percent of the 1997 levels. Congress structured the AFA so that these processors could each be linked to a cooperative that CVs would join. The CVs in the cooperative are required to abide by the delivery requirements defined in the cooperative agreement, of which the processor is a member.

Section 210(e) of the AFA sets out excessive harvesting and processing limits for participants to prevent the excessive consolidation of participants and privileges in the AFA Program. This section also established that any entity in which 10 percent or more of the interest is owned or controlled by another individual or entity shall be considered to be the same entity as the other individual or entity. This is referred to as the “AFA 10 percent rule.” The AFA also specified that no particular individual, corporation, or other entity may harvest, through a fishery cooperative or otherwise, a total of more than 17.5 percent of the BS pollock DFA. Excessive share processing caps were established by Council and NMFS at 30 percent of the sum of the Bering Sea pollock DFA. Every year, NMFS publishes this limit in the annual harvest specifications in terms of mt.

The AFA provides generic direction to the Council to develop “measures it deems necessary” to protect other fisheries from adverse impacts of the Act, including the formation of fishery cooperatives. The Council used this direction to establish sideboards to protect harvesters and processors of Bering Sea non-pollock groundfish and crab, as well as non-pollock groundfish and pollock harvested or processed in the GOA.

### **3.2 Amendment 80**

In June of 2006, the Council adopted a LAPP facilitating the formation of harvesting cooperatives and allocating several BSAI non-pollock groundfish species to the non-AFA trawl C/P sector. This program, known as Amendment 80, was implemented in 2008.

Discarding had long been a management concern for this fleet. In the multi-species flatfish fisheries, the lower valued fish (less valuable species, smaller fish, and fish without roe) were discarded, and only the more valuable fish retained. The race for fish exacerbated economic discarding by providing incentives to discard the less valuable fish that used up processing time and limited freezer space. To address these discards, the Council required full retention of Pacific cod, and later, a groundfish retention standard that would mandate an 85 percent minimum retention rate.

To provide the fleet the tools to comply with the groundfish retention standards, the Council developed the Amendment 80. The Amendment 80 program allocates a portion of the TACs for Atka mackerel, Pacific ocean perch, and 3 flatfish species (yellowfin sole, rock sole, and flathead sole), along with an allocation of PSC quota for halibut and crab, to the Amendment 80 sector. In addition, the Amendment 80 fleet is specifically allocated 13.4 percent of the BSAI Pacific cod TAC, after CDQ apportionment. All of the allocations are managed as a hard cap. These allocations are issued annually as quota share to owners of Amendment 80 vessels (or LLP license holders if the vessel is ‘lost’), based on the vessel’s catch history from 1998-2004. To qualify, vessels must have been a non-AFA trawl C/P and have a valid LLP license with a BSAI C/P endorsement and have processed more than 150 mt of groundfish (other than pollock) during the period 1997 through 2002. A total of 28 vessels qualified. Because the program was for C/Ps there was no need to address linkages between harvester and processors for allocated species.

Amendment 80 quota can be fished within a cooperative (comprised of at least 3 separate entities with at least 30 percent of the Amendment 80 vessels) as aggregated cooperative quota. Amendment 80 quota holders who do not form a cooperative arrangement with others are placed in the limited access fishery (BSAI trawl limited access sector) and continue to compete with each other for catch and PSC.

The program establishes GOA groundfish sideboard limits for pollock, Pacific cod, Pacific ocean perch, northern rockfish, and pelagic shelf rockfish, as well as GOA halibut PSC. GOA sideboard restrictions are based on historic participation during 1998-2004. In addition, participation in the GOA flatfish fishery is prohibited for vessels with less than 10 weeks of history in the GOA flatfish fisheries. One vessel is exempt from the GOA halibut PSC sideboard limits, having fished 80 percent of its weeks in the GOA flatfish fisheries from 2000 through 2003.

### 3.3 BSAI Crab Rationalization Program

A voluntary three-pie cooperative program for crab fisheries of the BSAI was implemented in 2005 and 2006. The BSAI Crab Rationalization Program was designed to address conservation and management issues associated with the derby fishery which had negative impacts on bycatch, discard mortality, and safety. The program issued crab harvesting quota to LLP license holders and captains and crab processing quota shares to shoreside processors demonstrating historical participation. Of the harvest shares, 90 percent are issued as Class A shares that require delivery to a processor holding processor quota, and the other 10 percent as Class B shares that can be delivered to any processor. Three percent of the harvest share pool is allocated to vessel captains and who do not have regional delivery requirements or share-matching requirements. Harvesters may choose to form a cooperative to increase the efficiency associated with harvesting their shares. In addition to economic incentives the program includes regulatory incentives to encourage cooperative participation (e.g. vessel use caps do not apply if the quota share is harvested within a cooperative). Nearly all the crab quota share has been harvested within the cooperatives.

The Crab Rationalization Program also built in measures to protect communities, including a 10 percent direct allocation of the TAC of each stock to the CDQ Program and the ability for CDQ groups to invest in and use non-CDQ Crab Rationalization Program harvester and processor quota. The program also includes regional landing requirements and processing quota transferability restrictions (i.e. a “cooling-off” period and right of first refusal on the sale of processor quota) to encourage processing in communities with history.

Other aspects of the program included defining how quota may be transferred, use caps, required elements of the crab harvesting cooperatives, protections for GOA groundfish fisheries through sideboard limits on some crab participants, an arbitration system to facilitate price formation between harvesters and processors, monitoring requirements, economic data collection, a the establishment of a mandatory cost recovery fee to offset additional management and enforcement costs created by the program, and establishment of a loan program for crab fishing vessel captains and crew members.

It is important to note that the Crab Rationalization Program was developed and implemented under Congressional authority provided at Section 313(j) of the MSA. Language in that section of the MSA is specific to the BSAI crab fisheries and would not apply to the BSAI Pacific cod fishery. Therefore, the Council does not have the authority to develop a program that mirrors the Crab Rationalization Program without Congressional action. For example, the Council may not recommend issuing processing quotas for Pacific cod without being granted additional authority. For the Crab Rationalization Program, the MSA required that the Secretary approve all parts of the Council’s program.

### 3.4 Central GOA Rockfish Program

In 2003, the U.S. Congress directed the Secretary of Commerce, in consultation with the Council, to establish a pilot program for management of the Pacific ocean perch, northern rockfish, and pelagic shelf rockfish fisheries in the Central GOA.<sup>8</sup> In response to this directive the Council adopted a share-based management program, under which the TAC is apportioned as exclusive shares to cooperatives and an entry level limited access fishery. The Central GOA rockfish LAPP was first implemented as the Rockfish Pilot Program (from 2007 through 2011) and then as the Rockfish Program for the next 10 years (2011 through 2021).

---

<sup>8</sup> Pelagic shelf rockfish included dusky rockfish, dark rockfish, yellowtail rockfish, and widow rockfish. Yellowtail, dark, and widow rockfish make up a very small proportion of the biomass and starting in 2012 a separate TAC was set for dusky rockfish and that species was allocated as a primary species in the Rockfish Program.

The Rockfish Program has some similar characteristics to the proposed LAPP for the BSAI Pacific cod trawl CV sector. For example, catch share history in the Rockfish Program is linked to the LLP license and can be transferred with the sale of the license, as is proposed under the BSAI Pacific cod trawl CV action. Due to this parallel, the description of the program elements goes into more depth than for other LAPPs. Impacts of the program including results of the provisions specifically implemented to achieve programmatic objectives are further evaluated in the Central GOA Rockfish Program Review (NPFMC, 2017).

The Rockfish Program provides separate primary and secondary species allocations to the CV and C/P sectors. Both sectors were allocated each of the primary species. Secondary species were allocated to sectors based, primarily on their historic dependence on the fishery (Table 3-1).

**Table 3-1 Central GOA primary and secondary species allocated to the CV and C/P sectors**

Primary Species	Secondary Species
Dusky Rockfish	Pacific cod (CV)
Northern Rockfish	Rougeye Rockfish (C/P)
Pacific Ocean Perch	Sablefish (CV and C/P)
	Shortraker Rockfish (C/P)
	Thornyhead Rockfish (CV and C/P)

For the Rockfish Pilot Program, eligibility to receive quota of primary and secondary species was based on targeted legal qualifying landings made during the years 1996 through 2002. A person's primary species allocation was based on best 5 of 7 years of landings during the eligibility period in the Central GOA. The Rockfish Program quota qualification was based on targeted legal landings during the years 2000 through 2006 or fishing in the entry level fishery during 2007, 2008, or 2009. The allocation of QS was based on the best 5 of 7 years from 2000 through 2006, or the number of years fished during the qualifying period for entry level fishery participants that did not qualify for QS based on history from 2000 through 2006.

In order to encourage cooperative formation, the Rockfish Program relaxed cooperative formation requirements that were established under the Pilot Program. The minimum number of LLP licenses with affixed rockfish QS required to form a cooperative was eliminated. However, CQ could only be transferred to a cooperative with a minimum of two LLP licenses. There was no requirement that the LLP licenses are held by different persons. These changes were implemented to encourage cooperative formation by providing greater flexibility to transfer CQ to meet operational demands.

The Rockfish Program includes an entry level fishery to continue to allow access for vessels that were not issued harvesting privileges. During the Pilot Program this included a trawl component as well as a longline (hook-and-line, troll, hand line or jig gear) component. When the Pilot Program transitioned to the Rockfish Program, the trawl entry level fishery was eliminated. Participants using this gear type in the Pilot Program's entry level trawl fishery were issued harvesting privileges and transferred into catch share management whereby 2.5 percent of the allocation was issued to the licenses that participated in the entry level trawl fishery in 2007, 2008, 2009. The entry level longline fishery continues to exist under the Rockfish Program; however, the amount of primary species available to this sub-sector was reduced in the



transition from the Pilot Program, because this amount had not been fully utilized. The program built in a stair-step increase for this sub-sector's allocation if  $\geq 90$  percent of the allocation is harvested.

Under both the Pilot Program and Rockfish Program, halibut PSC limits are assigned to cooperatives based on the proportion of primary species QS attached to the LLP license. Halibut PSC limits for the Rockfish Program were reduced from historical usage levels to balance the need to provide adequate halibut PSC for use by rockfish cooperatives while recognizing LAPPs could reduce halibut PSC use. From 2000 through 2006 (prior to the Pilot Program being implemented), average halibut PSC mortality averaged 84.7 mt in the C/P sector, and 134.1 mt in the CV sector. The Rockfish Program created a 74.1 mt halibut PSC limit for the C/P sector and a 117.3 mt halibut PSC limit for the CV sector. Those amounts represent a 12.5 percent reduction from the amount of halibut mortality associated with each sector during the 2000 through 2006 qualifying period. The remaining 27.4 mt (16.8 mt from the CV sector and 10.6 mt from the C/P sector) that would otherwise have been allocated is not available for use by any trawl or fixed gear fishery and remains "in the water" to contribute to the halibut biomass.

A Kodiak delivery requirement was included in the Rockfish Program to address concerns raised by processors that the Rockfish Program would provide harvesters an undue competitive advantage and that they could use that potential advantage to deliver outside of the traditional port of Kodiak. As a result, the Rockfish Program includes a requirement that all primary and secondary Rockfish Program species cooperative quota harvested by the CV sector must be delivered to a shorebased processor within the City of Kodiak. In addition to protecting traditional processors, the requirement is intended to protect the fishing community of Kodiak. While the Pilot Program also included a requirement that LLP license holders with quota fishing in the CV sector may only form a cooperative with other CVs and the processor to whom they historically delivered their catch from 1996 through 2000, this requirement was eliminated because the Council determined their program goals could be achieved without that provision.

The Rockfish Program includes other important features. Cooperatives must file a cooperative membership agreement with NMFS, containing a fishing plan, legal contractual obligations of members, and a monitoring program, and must annually report to the Council. Full retention of rockfish primary and secondary species is required to eliminate waste. Use caps for individual vessels (4 percent for CVs, 40 percent for C/Ps) and cooperatives (30 percent for catcher vessel, 60 percent for C/Ps) prevent excessive consolidation of the fleet. Shoreside processors are also subject to use caps (30 percent), unless grandfathered at a higher level based on processing history.

The Rockfish Program includes a series of CV and C/P sideboard restrictions to limit spillover impacts on other fisheries in the GOA. Sideboard limits were established for certain West Yakutat District and the Western GOA fisheries under the Pilot and Rockfish Programs. Rockfish Program sideboards apply to federally permitted vessels fishing in federal waters and waters adjacent to the Central GOA when the harvest of rockfish primary species by that vessel is deducted from the federal TAC. Sideboards limit both the LLP license with rockfish QS assigned to it, and the vessel used to make legal landings of rockfish QS.

Rockfish Program sideboards are in effect from July 1 through July 31. Sideboard measures are in effect only during the month of July when the rockfish fisheries were traditionally open and vessel operators had to choose between fishing in the Central GOA rockfish fisheries and other fisheries that were open to directed fishing.

CVs had small West Yakutat District sideboard limits for Pacific ocean perch and pelagic shelf rockfish under the Pilot program. The sideboard limit was modified to a ban on fishing those species in the West Yakutat District during July. The Central GOA Rockfish Program also prohibited CVs from directed fishing in any target fishery in the deep-water complex in the month of July (except for Central GOA Rockfish). This limitation prohibits CV from directed fishing in the Arrowtooth flounder, deep water

flatfish, and rex sole fisheries from July 1 through July 31. These restrictions were implemented to limit the ability of CVs in these fisheries because they had not historically harvested these species in July. As a result of this sideboard Central GOA Rockfish Program CVs are limited to fishing species in the shallow-water complex during the month of July.

C/P sideboard limits were designed to minimize potential adverse competition on non-Rockfish Program participants and potential conflicts among rockfish C/P cooperatives in the Western GOA and West Yakutat District rockfish fisheries, as well as GOA flatfish harvesters. Sideboard limits were not set for other rockfish species because those species were not traditionally harvested in July, so additional management measures were determined not to be needed. Because the Amendment 80 sideboard limits are set for all GOA species harvested by those vessels, the need for additional sideboard limits beyond the primary rockfish species and halibut PSC was mitigated. Therefore, sideboard limits are imposed for only dusky rockfish, Pacific ocean perch, and northern rockfish.

The Rockfish Program also established a sideboard limit on the amount of halibut PSC that could be used in July. The halibut PSC sideboard limits are based on historical halibut PSC usage during July. Halibut PSC sideboards were established for shallow-water species and the deep-water species complex. The percentage assigned as a sideboard limit was based on the annual average halibut PSC used by vessels with LLP licenses subject to the sideboard limit during July from 2000 through 2006 relative to the total available.

### **3.5 Pacific Cod Freezer Conservation Cooperative (Voluntary Cooperative)**

Each year 48.7 percent of the BSAI non-CDQ Pacific cod TAC is allocated to the hook and line C/P sector (e.g. freezer longline sector) through the annual harvest specifications process. This sector chose to form a non-regulatory voluntary cooperative in order to harvest this allocation. The Freezer Longline Conservation Cooperative (FLCC) is established through private contractual arrangements that divide the hook and line C/P sector's Pacific cod and halibut PSC allocations among the member LLP license holders. Cooperative members each receive a share of the quota for harvest; shares are issued in proportion to historical fishing activity with the LLP license. Cooperative members are free to transfer their quota shares among themselves, and to stack shares on individual vessels.

NMFS implemented monitoring and enforcement provisions as a result of several pieces of legislation passed by Congress and subsequent changes to fishery management regulations, including 1) the 2005 Consolidated Appropriations Act (Pub. L. 108–447), which created a defined class of participants in the BSAI longline C/P subsector; 2) the final rule implementing Amendment 85 to the BSAI FMP (74 FR 56728, November 3, 2009), which allocated a specific quantity of Pacific cod resources in the BSAI to the defined class of longline C/P subsector participants; and 3) the Longline Catcher Processor Subsector Single Fishery Cooperative Act of 2010 (Pub. L. 111–335), which allows BSAI longline CP subsector participants to receive exclusive catch privileges. In combination, these changes created the opportunity for participants in the BSAI longline C/P subsector to form a voluntary fishing cooperative, the FLCC, whose members have a *de facto* catch share program because they effectively control fishing for the longline C/P subsector's allocation of Pacific cod in the BSAI.

Because this cooperative was established through private contractual arrangements and not through Federal regulations guided by the Council, this program is not subject to the MSA LAPP requirements. For instance, this cooperative structure does not include excessive share limits (use caps, vessel caps, or cooperative caps), it does not include community provisions, or requirements for cost recovery. Harvesting and management decisions are generally not public information but determined internally by the cooperative members.

Depending on the cooperative structure the Council wishes to consider for the BSAI Pacific cod trawl CV fishery, there may be some similarities between the voluntary FLCC and the AFA portion of the BSAI Pacific cod trawl CV sector. Given the pre-established coordination between the AFA CV harvesters, there may be non-regulatory options for cooperative structure for this sub-sector. This is discussed further in Section 4.2.

### **3.6 Tabular Summary of Example Cooperative Programs**

The cooperative programs described in Sections 3 are further summarized in Table 3-2. This table allows for a comparison of the program objectives and elements within the management structure of each program. While all LAPPs must comply with MSA LAPP requirements and additional laws, depending on the characteristics of the historical fishery and participation, as well as the problems that the LAPP structure was seeking to address, the Council has often had a different vision for the LAPPs it has recommended to the Secretary of Commerce. Table 3-2 and some of the program summaries were adapted from Fina (2011).

Table 3-2 Summary of cooperative programs in the North Pacific

	Freezer Longline Conservation Cooperative	BSAI crab rationalization	AFA BSAI pollock	Amendment 80 Bering Sea non-pollock groundfish trawl fishery	Central GOA Rockfish Program
Type of allocation	Sector allocation of Pacific cod with Pacific cod LLP license endorsement (Amendment 77 in Dec 2004)	Individual fishing quotas with cooperative option	Cooperatives with limited access option	Cooperatives with limited access option	Cooperatives with entry level fishery
Year implemented	2006 limited participation; by the 2010 B season full participation.	2005-2006 season	1999 and 2000	2008	2007 pilot program & 2012 Rockfish Program
Catalyst for program	Derby fishery Short seasons Overcapitalization Safety	Derby fishery Short seasons Overcapitalization Safety	Allocation dispute between inshore and offshore sectors	Bycatch reduction and individual bycatch accountability	Derby fishery Short seasons Loss of product quality Conflicts with other fisheries (salmon)
Fishing location	BSAI	BSAI	BSAI	BSAI	Central GOA
Program development	Not a Council developed program. Sector developed a voluntary cooperative program	Council program under specific Congressional authority	Congressionally developed program with some Council developed components	Council developed program under MSA authority	Pilot: Congressional mandated program developed by the Council. RP developed by the Council under MSA.
Harvester initial allocation	Determined by members	97% to limited entry LLP license holders; 3% to captains (based on catch histories)	Vessel owners (based on catch histories)	Vessel owners (based on catch histories)	LLP holders (based on catch histories of the LLP license)
Processor component	N/A	Processor QS and price arbitration	Severable processor/cooperative associations	N/A	Pilot: Non-severable processor/cooperative association based on landings history; RP Kodiak landing requirement.
Gear type	Longline	Pot	Trawl	Trawl	Trawl
Number of area/species allocations	N/A	9 allocations	2 allocations	10 allocations plus; 5 bycatch allocations	8 allocations plus; 1 bycatch allocation
Number of vessels in season prior to program implementation	38	167 BS <i>C. opilio</i> ; 251 Bristol Bay red king crab; 20 AI golden king crab.	113 CVs 38 C/Ps	22	25 CVs 6 C/Ps
Number of vessels in most recent season	28	63 BS <i>C. opilio</i> ; 55 Bristol Bay red king crab; 3 AI golden king crab.	81 CVs 15 CPs	20	26 CVs 4 C/Ps

**Summary of cooperative programs in the North Pacific continued**

	Freezer Longline Conservation Cooperative	BSAI crab rationalization	AFA BSAI pollock	Amendment 80 Bering Sea non-pollock groundfish trawl fishery	Central GOA Rockfish Program
Observers	100% and At-Sea scales or 200%	100% C/P 20% - 50% CVs (varies by fishery)	200% C/P 100% CVs	200%	200% C/Ps 100% CVs
Cap on individual share holdings/use	N/A	1% - 10% (varies by fishery)	17.5%	30% of aggregate quota	4% CVs 40% C/Ps
Vessel use caps	N/A	None in cooperative; 2% - 20% of outside cooperative (varies by fishery)	17.5%	20% of aggregate quota	60% for C/Ps 8% for CVs
Cooperative use cap	N/A	None	None	None	30% for CVs
Processing cap	N/A	30% of processor shares by fishery	30%	N/A	30%
Share classes	N/A	Operation type (CV/C/P) and owner share/crew share	Operation type (CV shoreside/C/P/ CV mothership)	None	Operation type (CV/C/P)
Owner-on-board/active participation requirements	N/A	Active participation requirement for crew shares	None	None	None
Eligibility to acquire shares	N/A	Sea time requirement for all shares; active participation requirements for crew shares	None	None	None
Community provisions	N/A	2-year port-specific landing requirement; regional landing requirements; community right of first refusal on processor quota	None	None	Kodiak delivery requirement for CVs
Elements to improve entry opportunities	N/A	Crew share QS requires active participation for acquisition and retention; loan program	None	None	Set-aside Entry Level Longline
Subject to Cost Recovery	No	Yes	Yes	Yes	Yes

## 4 BSAI Trawl CV Sector LAPP

This section highlights context and issues relevant to the Council's consideration of a BSAI Pacific cod trawl CV sector LAPP. Each sub-section first includes a bulleted list of outstanding decision points or topics of consideration, that the Council will need to consider in designing a LAPP for this fishery. Some of these decision points may translate into alternatives or options in the development of a LAPP; some may highlight areas that would benefit from additional public input. The sub-sections also include relevant context for understanding these decision points within the scope of a potential BSAI Pacific cod trawl CV sector LAPP, including statistics on recent participation.

The sections included address the bulleted elements and direction from the Council's February 2019 motion, as well as highlighting requirements and discretionary elements of a LAPP stated in MSA and summarized in Section 2.

### 4.1 Program Objectives

#### Topics of Council consideration:

- **Any clarification/ expanded description of the issues with the status quo fisheries?**
- **Any specific goals for this LAPP that could be used to measure the program's success?**

MSA specifies the types of conditions where the creation of a LAPP may be warranted and dictates that the goals of the program must be specified (Section 2). Based on experience with past LAPPs, the more specific the Council can be in articulating its vision for the fishery through stated objectives, the more effective a review of a program can be in its MSA-required 5 and 7-year review cycle. Specific objectives allow for a better understanding of whether the proper information is being collected to evaluate those objectives and makes the review process less subjective. Moreover, clearly defined objectives allow future Councils to understand any unintended consequence that may arise from the management shift and if proposed amendments fit within the original stated objectives.

For instance, Table 3-2 summarizes the catalysts in the development of existing cooperative programs; not all of these LAPPs were developed for the same reasons. For example, despite the short seasons and derby-like conditions, overcapitalization was not a prominent factor in the creation of the Central GOA Rockfish Program in the way that it was for the BSAI Crab Rationalization Program. Although coordination among harvesters has increased in the Central GOA Rockfish Program, minimal consolidation occurred after the LAPP was developed (NPFMC, 2017).

The Council's purpose and need statement (Section 1.1) and previous public testimony has highlighted some of the conditions in the BSAI Pacific cod trawl CV sector that have led to the present consideration of a change in management, including:

- a decline in Pacific cod TAC,
- an increase in the number of LLP licenses used by this sector and the risk of additional entrants,
- length of the fishery has compressed in recent years,
- inability to maximize the value of the fishery,
- high bycatch, and
- safety.

The Council and the public may consider whether this list comprehensively details the issues present in the current fishery. In addition to the issues discussed in the purpose and need, the Council may consider whether to include a more specific list of programmatic objectives.

## 4.2 Cooperative Structure

### Topics of Council consideration:

- **If a cooperative structure is used, would the cooperative formation be voluntary or prescribed in regulations?**
- **Would the Council allow for/ encourage the formation of an AFA and non-AFA cooperative?**
- **Would there be any restrictions on the number of cooperatives that may form (min or max)?**
- **Would there be any restrictions on the percent of share history that may be required to form a cooperative?**
- **Would cooperative membership be mandatory in order to participate in this fishery?**
- **Would there be any mechanism for the transfer of quota between cooperatives?**

The Council's February 2019 motion suggests that under the proposed program, Pacific cod catch history could be assigned to an LLP license based on the qualification criteria selected and that allocation could be harvested under a cooperative structure. The regulatory definition for "cooperative" is somewhat different for each program specified in Section 3; however, in essence, a cooperative is a group of quota holders who have chosen to pool their allocated or acquired harvesting privileges allowing them to coordinate their harvest (and the terms of harvest) without official regulatory transfers within the cooperative. Typically, once a cooperative is formed, the harvesting privileges are issued directly to the cooperative based on member allocations. Cooperative arrangements are based on private contracts negotiated to sub-allocate harvesting privileges within the group and rely on civil litigations to uphold the terms of the contracts (National Research Council, 1999). Thus, under a cooperative structure, Pacific cod trawl CV catch history would be pooled within the cooperative, from a NMFS perspective, allowing its members to make internal decision about how that allocation is harvested by agreement among the members of the cooperative.

Cooperatives may form outside of regulatory action or within a structure defined in regulations. For instance, as described in Section 3.5, the FLCC did not form based on a specific Council action. This group is not technically considered a LAPP and therefore does not follow the same structure or requirements of LAPPs. Conversely, all other example cooperative programs from Section 3 were formed after Council action. Provided below is an expanded description of the voluntary cooperative approach and the Council defined cooperative approach.

In addition to the structural cooperative considerations in this section, Section 4.5 includes considerations of potential harvesting cooperative and processor linkages.

### 4.2.1 Voluntary Cooperative

As introduced in Section 3.5, the best example of a voluntary cooperative in the North Pacific is the FLCC. Each year 48.7 percent of the BSAI Pacific cod is allocated to the freezer longline C/P sector through the annual harvest specifications process. Since 2006, most of the holders of HAL C/P LLP licenses endorsed for BSAI Pacific cod have been members of the FLCC. Through private negotiations

and a federally funded buyback loan in 2007, midway through 2010 (B-season), the FLCC had 100 percent participation and began fishing as a voluntary cooperative under management contracts facilitated by the group. FLCC members each receive a share of the sector's allocation for harvest; shares are issued in proportion to historical fishing activity associated with each LLP. FLCC members are free to exchange their shares among themselves, and to stack shares on individual vessels. Compliance with the agreement is monitored by SeaState, Inc., and there are heavy financial penalties for non-compliance. Dissolution of the cooperative requires the agreement of an 85 percent supermajority of LLP license holders.

This example may be relevant to the AFA component of the BSAI Pacific cod trawl CV sector in particular because AFA vessels within the trawl CV sector are already members of AFA cooperatives. This pre-established structure may help facilitate the formation of a voluntary cooperative for that component of the sector's Pacific cod allocation<sup>9</sup>. The voluntary cooperative structure could be designed around the AFA cooperatives or could be implemented as a single cooperative (or an inter-cooperative agreement) as developed for the pollock fishery. This structure would require that the trawl CV sector allocation be divided between AFA and non-AFA vessels/LLP licenses. That division of catch history would allow the AFA participants to assign their portion of the history to a voluntary cooperative.

Given their diversity in operations, owners and operators of non-AFA vessels/LLP licenses may have more difficulty in forming a voluntary cooperative. The non-AFA sector is comprised of a diverse group of vessel owners and LLP license holders that includes Amendment 80 firms, AFA firms, Central GOA Rockfish Program participants, and firms that are not members of any cooperative (see Section 4.7.2).

#### **4.2.2 Cooperative Structure Defined in Regulation**

Most of the cooperative programs that exist in the North Pacific had some level of Council guidance in their development and include some regulatory requirements. For instance, regulations may require an annual application detailing membership in order for NMFS to issue harvesting shares directly to the cooperative and ensure compliance with any cooperative use caps or min/ max requirements on membership. The Council can consider whether there will be regulatory restrictions on the number of cooperatives that may form (i.e. a minimum or maximum) or the percent of shareholders that must join in order to be eligible, or the Council may choose not to include participation requirements. The Council may also consider whether cooperative membership would be mandatory or if it would allow option *not* to join a cooperative.

##### **4.2.2.1 Number of Cooperatives**

The Council could recommend rules that would define the number of cooperatives that could be formed. One option would be to have a single cooperative that would be open to all LLP license holders that have Pacific cod catch history assigned to their LLP license based on the qualification criteria selected. This method may make transferability simpler, as the fleet would not have to deal inter-cooperative transfers. However, it could also be challenging for the whole sector's fleet to agree on terms under one cooperative, and if cooperative membership is required, it may create a situation where some members would have more bargaining power because of when they joined. Other options would be to allow more than one cooperative to form (either a determined number or with no limit). For example, there could be an AFA and non-AFA cooperative. The Council could also allow more than one non-AFA cooperative. Based on concerns expressed during the recent Pacific cod mothership action, the Council could also structure the cooperatives around CVs that deliver their catch to inshore processing plants or motherships (discussed more in Section 4.5).

---

<sup>9</sup> AFA CVs can operator in an open access pollock fishery when changing cooperatives.



**4.2.2.2 Percent of QS Holders that Must Join**

Setting the percentage of eligible members that must agree to form a cooperative is an important issue in terms of agreement and bargaining power. The AFA requires that owners of 80 percent of eligible CVs must agree to join a cooperative before it can form. The 80 percent rule was implemented to help ensure that bargaining power within the cooperative was not given to too few members. Requiring too many potential members to join could increase the bargaining power of the last persons to join to meet the minimum required percentage. After the minimum is met, the bargaining power of additional entrants could be reduced and they could be forced to accept the terms agreed to by the other members, which may or may not place them at a disadvantage.

Not requiring all potential members to join a cooperative could mean that some individuals may elect to remain in an open access portion of the fishery. However, there would likely be substantial incentives for them to join a cooperative if the alternative is to compete with all vessels that can fish in the open access. This would include both persons who had Pacific cod catch history assigned to their LLP license but opted not to join cooperative and also those who hold a BSAI trawl license that did not have Pacific cod catch history (or had a very small amount) assigned to their LLP license. The competition for a potentially small amount of quota would create an incentive for all LLP license holders with catch history to join a cooperative.

**4.3 Allocation Decisions****Topics of Council consideration:**

- **What criteria will be used to determine initial allocation?**
  - **Which years will be used to establish history?**
  - **Would participation include just targeted catch or targeted and incidental catch?**
  - **How to assign catch history to LLP licenses when more than one LLP license was assigned to the CV at the time the fish were harvested?**
  - **How to assign catch history in the event of internal AFA cooperative leasing?**

This section provides context for a discussion of harvesting privilege allocations and highlights historical participation and other important nuances of participation for the Council to consider. Section 303A(c)(5) of MSA states the Council is required to establish procedures to ensure fair and equitable initial allocations, while specifically considering 1) current and historical harvests; 2) employment in the harvesting and processing sectors; 3) investments in, and dependence upon, the fishery; and 4) the current and historical participation of fishing communities..

**4.3.1 Harvest and Participation Data**

The Council's February 2019 motion did not indicate which dates an allocation decision may be based around, except for establishing a control date of February 7th, 2019. Thus, analysts have chosen to provide participation from the longest reliable time period; 2003 through 2018. The years back to 2003 were included because consistent data only reaches back to 2003, when the current Catch Accounting System (CAS) was implemented. Information through 2018 is included as the last year of complete fishing data<sup>10</sup>. The information provided does not signal the Council's intent to rely on these specific years for allocation decisions, which can be further honed with Council direction. In addition, only BSAI

---

<sup>10</sup> Data through February 7, 2019 could be included based on the Council's control date but was not provided in this document.

Pacific cod catch that is deducted from the trawl CV sector allocation is included in the tables. That means that Pacific cod catches attributed to State of Alaska fisheries, CDQ fisheries, and other federal fisheries sectors are excluded. Also, all landed catch (including catch from the parallel fishery<sup>11</sup>) is included. This means at-sea discards are excluded. However, as noted in Table 4-1, since the implementation of the improved retention/improved utilization (IR/IU) program in 1998, discards of Pacific cod in the BSAI have been very low for AFA trawl CVs, non-AFA trawl CVs, and pot CVs and will not substantially impact the potential allocations of history to LLP licenses.

**Table 4-1 Annual percent of BSAI Pacific cod discarded for AFA trawl CVs, non-AFA trawl CVs, and pot CVs**

CV group	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
AFA trawl CVs	0.6%	0.7%	0.3%	0.8%	1.3%	0.1%	0.6%	0.6%	0.2%	0.1%	0.2%	0.4%	0.0%	0.3%	0.4%	0.3%
Non-AFA CVs	1.1%	0.3%	0.3%	0.8%	1.1%	0.0%	1.7%	0.2%	0.3%	1.0%	0.6%	0.4%	1.0%	0.3%	4.5%	1.1%
Pot CVs	0.9%	0.3%	0.4%	0.5%	0.4%	1.0%	0.1%	0.0%	0.0%	0.1%	0.1%	0.3%	0.1%	0.1%	0.0%	0.3%

Source: AKFIN summary of CAS data (BSAI\_PCOD\_R\_D(7-9-2019))

Catches with no LLP license associated with the harvest (the LLP license field was blank) are also excluded from subsequent participation tables. In most cases these were landings by vessels in the AI and some were made by vessels that had used an AI transferable endorsement. This raises the issue of how to treat catch that does not have an associated LLP license or is associated with an LLP license that does not have a trawl endorsement for the AI but is using a transferable AI endorsement. In the latter case, the Council will need to determine if the catch history for Pacific cod should be attached to the transferable AI endorsement. Assigning the catch to the LLP license could result in it being assigned a license that does not have a trawl endorsement for either AI or BS if the endorsement is transferred. In total, between 2003 and 2018, there were 39 vessels associated with landings where the LLP license field was blank (Table 4-2). Over 93 percent of the catch with no LLP license was reported in the AI. If only the 2010 through 2018 period is considered, 15 vessels were associated with catch where there was no LLP license number reported. Over 75 percent of that catch was from the AI.

**Table 4-2 Targeted Pacific cod catch reported with the LLP license field blank**

Weight/Vessels	2003	2004	2005	2006	2007	2008	2009	2010	2012	2015	2016	2017	2018	Total
AI														
Weight (mt)	6,073	2,060	506	1,561	712	550	738	828	225		*		1,190	14,682
Vessels	15	7	4	10	12	10	9	5	3		2		6	30
BS														
Weight (mt)	140	*	*							*	*	*	*	1,037
Vessels	6	2	1						1	1	1	1		11
Total														
Total Weight (mt)	6,213	*	*	1,561	712	550	738	828	*	*	409	*	1,190	15,718
Total Vessels	19	9	5	10	12	10	9	5	4	1	3	1	6	39

Source: AKFIN summary of CAS data (BSAI\_TRW\_LLP\_PCODLANDINGS(5\_16\_2019))

### 4.3.2 Historical Dependence

Several tables are provided in this section to allow the Council to consider various allocation options and their potential impacts. Tables were generated to show AFA versus non-AFA catch, the number of AFA vessels that were replaced, AFA sideboard exempt and non-exempt catch, AI vs BS catch, and directed fishing versus incidental catch.

#### 4.3.2.1 AFA and Non-AFA

The first grouping of catch data provided shows the targeted Pacific cod catch by LLP licenses associated with AFA and non-AFA vessels (Table 4-3). Annual data are presented. Data are not grouped by year combinations because the Council has not identified alternatives and options. Summing the annual catch data allows the reader to create combinations of years and calculate percentages that could be assigned to

<sup>11</sup> See Section 4.9.4 for further information on parallel fishery activity.

AFA and non-AFA LLP licenses. However, it is not possible from the data provided to determine the number of LLP licenses that may be assigned catch history if various combinations of years are used.

Table 4-3 shows that from 2003 through 2018 the non-AFA vessels harvested between approximately 5 percent and 25 percent of the BSAI targeted Pacific cod from the trawl CV sector allocation. Since 2010 these vessels have always harvested at least 15 percent of the sector's catch. From 2003 through 2018 a total of 18 LLP licenses were used on 20 non-AFA vessels. A total of 94 LLP licenses were used on AFA vessels over that period and the annual number used ranged from a low of 37 in 2010 to a high of 63 in 2003. Variation in the number of vessels and LLP licenses that were active in the fishery during a year is driven by many factors including prices, TACs, other fishing opportunities, and various management measures considered to limit participation in the BSAI Pacific cod fishery.

**Table 4-3 Targeted trawl CV sector BSAI Pacific cod landings 2003 through 2018**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Non-AFA																	
Landed Catch (mt)	3,173	1,661	1,547	1,568	1,714	3,755	3,776	4,219	7,695	7,066	6,832	6,136	7,874	7,000	6,642	6,868	77,526
Landed Catch (%)	9.4%	4.7%	5.1%	5.1%	6.0%	13.6%	15.0%	17.0%	22.2%	17.4%	17.5%	15.7%	24.8%	16.9%	17.9%	21.1%	14.6%
LLP Licenses	7	6	6	6	9	9	6	7	12	10	11	6	7	9	12	13	18
Vessels	7	6	6	6	8	9	6	7	12	10	11	6	7	9	12	12	20
Processing Plants	6	7	7	8	10	11	8	7	8	8	7	5	7	8	12	14	36
AFA																	
Landed Catch (mt)	30,577	33,424	28,834	29,312	26,724	23,785	21,390	20,540	26,928	33,467	32,142	32,985	23,825	34,307	30,445	25,651	454,338
Landed Catch (%)	90.6%	95.3%	94.9%	94.9%	94.0%	86.4%	85.0%	83.0%	77.8%	82.6%	82.5%	84.3%	75.2%	83.1%	82.1%	78.9%	85.4%
LLP Licenses	64	65	57	52	51	54	42	38	39	48	45	47	45	51	52	53	94
Vessels	63	62	53	48	49	52	40	37	38	44	42	42	40	47	48	48	82
Processing Plants	10	12	11	10	11	12	8	7	11	10	10	9	8	14	14	14	35
Total																	
Total Landed Catch (mt)	33,750	35,086	30,381	30,880	28,439	27,540	25,166	24,759	34,622	40,533	38,974	39,122	31,698	41,308	37,087	32,519	531,863
Total Landed Catch (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total LLP Licenses	71	71	63	58	60	63	48	45	51	58	56	53	52	60	64	66	109
Total Vessels	70	68	59	54	57	61	46	44	50	54	53	48	47	56	60	60	102
Total Processing Plants	10	13	12	11	12	14	10	8	13	11	12	10	11	17	17	19	41

Source: AKFIN summary of CAS data (BSAI\_TRW\_LLP\_PCODLANDINGS(5\_16\_2019))

Although vessels were originally named in the AFA, the Coast Guard Act of 2010 provided the opportunity for the replacement, removal, and consolidation of fishing vessels eligible to participate in the BSAI AFA inshore pollock CV fishery. Some of those vessels reported targeted fishing for Pacific cod. When vessels are replaced, the LLP licenses associated with the vessels may be transferred to the replacement vessel or it could be transferred to a different vessel. If the Pacific cod catch history is associated with the LLP license used to harvest the Pacific cod, that catch history and any QS that may result will be assigned to the LLP license. Table 4-4 shows the vessels that were in an inshore cooperative but not actively fishing every year from 2005 through 2019. These vessels were replaced or are replacement vessels. Vessels with a star in the left-hand column indicates they were associated with BSAI Pacific cod landings from the trawl CV sector. It appears that all the LLP licenses of replaced vessels with Pacific cod history were transferred to active AFA vessels that may or may not have Pacific cod history of their own.

**Table 4-4 AFA CV vessels that did not hold an AFA inshore permit (white cells) all years from 2005 through 2019**

Pacific cod	Vessel	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Years
	AJ																11
	ALASKAN COMMAND																8
*	ALASKAN DEFENDER																4
	AMERICAN CHALLENGER																14
*	ARCTIC RAM																7
*	BERING DEFENDER																8
	BLUE FOX																9
	DEFENDER																4
	DONA MARTITA																7
*	EXODUS EXPLORER																5
	GUN-MAR																11
	HAZEL LORRAINE																8
*	INTREPID EXPLORER																6
*	MARGUN																13
	MARGUN																2
	MORNING STAR																14
	MORNING STAR																13
*	MS AMY																10
	NORDIC EXPLORER																8
	NORTHERN DEFENDER																2
*	NORTHERN RAM																6
	PACIFIC KNIGHT																8
	PACIFIC MONARCH																7
*	PATRICIA L																5
*	PEGGY JO																13
	POSEIDON																10
	PREDATOR																14
*	TRACY ANNE																9

Source: <https://www.fisheries.noaa.gov/alaska/commercial-fishing/permits-and-licenses-issued-alaska>

The AFA inshore inter-cooperative reports provide more detail on the transfer of AFA catch history. For example, using the 2018 report, it describes how over the course of 2018 three vessel consolidations occurred. The Peggy Jo was replaced by the Arctic Wind which is an existing AFA CV. The Arctic Wind now holds both its and the Peggy Jo's catch histories as well as the LLP license. The Peggy Jo is shown exiting the AFA sector that year in Table 4-4. The Leslie Lee, an existing AFA CV replaced the Predator and now holds both vessels' catch histories and the LLP license. The Predator did not report targeted Pacific cod landings. The American Challenger was replaced by the existing AFA vessel the Forum Star. Their catch histories were combined as well. The MarGun, a dual qualified mothership and inshore sector CV was declared a total loss and was replaced by a vessel named the MarGun that was not previously an AFA vessel and the LLP license with Pacific cod catch history was moved to the new vessel.

Another facet of AFA trawl CVs is that some AFA CVs were subject to BSAI Pacific cod sideboards while other AFA trawl CVs were exempt from these sideboard limits. A sideboard is a catch limitation designed to prevent the recipients of a LAPP from using the flexibility and exclusive privileges granted under the LAPP to expand into other fisheries at levels that exceed their historic participation. When developing Amendments 61/61/13/8 that implemented AFA, the Council recommended that certain AFA CVs that have relatively small pollock fishing histories and that showed significant economic dependence on BSAI Pacific cod be exempt from BSAI Pacific cod sideboards. For AFA CVs to receive an exemption from BSAI Pacific cod sideboards, they had to have made 30 or more legal landings of BSAI Pacific cod in the BSAI directed fishery for Pacific cod from 1995 to 1997, averaged annual BS pollock landings less than 1,700 mt from 1995 to 1997, and be less than 125 ft in length. In addition, the Council recommended that all AFA CVs with mothership (MS) endorsements be exempt from Pacific cod sideboard measures after March 1 of each year. Of the 112 permitted AFA CVs that were initially

permitted, 10 were exempt from the BSAI Pacific cod sideboard limits under the landings and vessel size criteria, as are the 19 vessels that are members of the MS sector, after March 1 of each fishing year (Northern Economics, Inc., 2017). The remaining 83 AFA CVs are subject to BSAI Pacific cod sideboard limits. Pacific cod harvest caught by exempt AFA CVs as a percentage of the Pacific cod harvest of all AFA CVs has ranged from a low of 30 percent in 2003 to a high of 36 percent in 2011, and overall shows a slight increasing trend (Northern Economics, Inc., 2017). Based on the 2019 LLP license file, there were nine active LLP licenses with an AFA CV BSAI Pacific cod exempt flag and 90 active LLP licenses with an AFA endorsement without a BSAI Pacific cod exempt flag.

Table 4-5 breaks out the target catch of BSAI Pacific cod by trawl CVs classes of vessel. As part of its motion the Council requested that this discussion paper provide information on historical harvest by AFA cod exempt vessels, AFA cod non-exempt vessels, and non-AFA vessels. The information provided is similar to Table 4-3 except it provides a breakout of the AFA sector by whether vessels were Pacific cod exempt.

**Table 4-5 Trawl CV sector targeted Pacific cod catch by non-AFA, AFA BSAI Pacific cod exempt, and BSAI Pacific cod non-exempt vessels**

Trawl CVs	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Metric Tons																	
Non-AFA	3,173	1,661	1,547	1,568	1,714	3,755	3,776	4,219	7,695	7,066	6,832	6,136	7,874	7,000	6,642	6,868	77,526
AFA non-BSAI Pacific cod exempt	23,561	24,179	20,676	21,429	20,272	18,452	14,372	13,349	17,005	22,025	22,260	23,641	15,008	24,128	23,087	21,219	324,666
AFA Pacific cod exempt	7,016	9,245	8,157	7,882	6,452	5,333	7,018	7,191	9,923	11,442	9,882	9,344	8,816	10,180	7,358	4,432	129,672
Grand Total	33,750	35,086	30,381	30,880	28,439	27,540	25,166	24,759	34,622	40,533	38,974	39,122	31,698	41,308	37,087	32,519	531,863
Percentage																	
Non-AFA	9.4%	4.7%	5.1%	5.1%	6.0%	13.6%	15.0%	17.0%	22.2%	17.4%	17.5%	15.7%	24.8%	16.9%	17.9%	21.1%	14.6%
AFA BSAI Pacific cod non-exempt	69.8%	68.9%	68.1%	69.4%	71.3%	67.0%	57.1%	53.9%	49.1%	54.3%	57.1%	60.4%	47.3%	58.4%	62.3%	65.3%	61.0%
AFA Pacific cod exempt	20.8%	26.4%	26.9%	25.5%	22.7%	19.4%	27.9%	29.0%	28.7%	28.2%	25.4%	23.9%	27.8%	24.6%	19.8%	13.6%	24.4%
Grand Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: AKFIN summary of CAS data (BSAI\_TRW\_LLP\_PCODLANDINGS(5\_16\_2019))

The AFA BSAI Pacific cod exempt vessels averaged over 14 percent of the sectors target Pacific cod catch. Annually, they harvested between 13 percent and 29 percent of the total. The smallest percentage was in the most recent year data are provided (2018). This is likely a result of the increased fishing effort by other sectors to harvest a declining TAC.

#### 4.3.2.2 Targeted and Incidental Pacific Cod

Pacific cod allocations under a LAPP could be based on either historical targeted landings of Pacific cod or total landings of Pacific cod. Table 4-6 shows the annual amount of BSAI Pacific cod reported in the CAS data as being caught in the Pacific cod target fishery or other target fisheries and the total amount of Pacific cod harvested that is deducted from the BSAI trawl CV sector allocation. From 2003-2018, incidental catch of Pacific cod ranged from about 7 percent to about 15 percent of the total Pacific cod catch, with an average of 11 percent. The incidental catch of Pacific cod average was 4.2 mt, with a range of 3 mt to over 6 mt annually. Section 4.1.6.3 provides a brief discussion of issues associated with management of incidental catch of Pacific cod.

**Table 4-6 Targeted and incidental catch of Pacific cod in BSAI by trawl CV sector**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Pacific Cod																	
Landed Catch (mt)	33,750	35,086	30,381	30,880	28,439	27,540	25,166	24,759	34,622	40,533	38,974	39,122	31,698	41,308	37,087	32,519	531,863
Landed Catch (%)	90.8%	90.7%	86.6%	89.1%	91.0%	89.5%	87.3%	89.7%	87.1%	86.3%	89.4%	92.5%	84.3%	91.8%	86.8%	89.1%	88.9%
LLP Licenses	71	71	63	58	60	63	48	45	51	58	56	53	52	60	64	66	109
Vessels	70	68	59	54	57	61	46	44	50	54	53	48	47	56	60	60	102
Processing Plants	10	13	12	11	12	14	10	8	13	11	12	10	11	17	17	19	41
Other Species																	
Landed Catch (mt)	3,439	3,610	4,705	3,791	2,806	3,226	3,663	2,853	5,124	6,453	4,635	3,151	5,898	3,710	5,656	3,967	66,687
Landed Catch (%)	9.2%	9.3%	13.4%	10.9%	9.0%	10.5%	12.7%	10.3%	12.9%	13.7%	10.6%	7.5%	15.7%	8.2%	13.2%	10.9%	11.1%
LLP Licenses	95	94	95	90	94	93	93	94	92	95	93	96	96	99	97	98	115
Vessels	91	92	91	87	91	90	90	91	89	92	88	90	89	92	91	89	107
Processing Plants	12	14	12	13	11	13	11	12	11	11	11	11	16	18	16	19	38
Total																	
Landed Catch (mt)	37,189	38,695	35,086	34,670	31,244	30,766	28,830	27,612	39,746	46,987	43,609	42,273	37,596	45,017	42,742	36,486	598,550
Landed Catch (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
LLP Licenses	112	109	109	106	110	109	107	103	107	109	107	104	105	107	107	109	130
Vessels	107	105	104	101	105	104	102	99	104	104	101	98	98	100	101	99	124
Processing Plants	17	19	18	16	16	20	15	13	17	16	16	15	20	22	21	23	50

Source: AKFIN summary of CAS data (BSAI\_TRW\_LL\_PCODLANDINGS(5\_16\_2019))

If the Council considers basing the LAPP allocation on targeted Pacific cod catch, the targeted Pacific cod catch history would be assigned to LLP licenses. Trawl vessels that hold a valid LLP license to use trawl gear in the BSAI could still harvest Pacific cod as incidental catch in other fisheries, but they would not be allowed to harvest Pacific cod in the directed fishery. Table 4-6 shows that 21 of the 130 total LLP licenses used to harvest Pacific cod from 2003 through 2018 were only associated with incidental catches of Pacific cod from the BSAI. These 21 LLP license holders with no targeted Pacific cod catch would not qualify for quota if the allocation was based on targeted Pacific cod landings. These LLP license holders may or may not be allowed to harvest Pacific cod assigned to a cooperative. That would be a policy decision and would require those LLP license holders to be members of the cooperative when they are fishing that cooperative's quota. This is necessary to allow NMFS to accurately account for each cooperative's harvest.

LLP license holders with no quota may be allowed to harvest Pacific cod assigned to LLP licenses that do not join a cooperative, if the program includes a limited access component that is comprised of all quota that is not assigned to a cooperative. Those fish could then be harvested by any LLP license holder that has a BS and/or AI trawl endorsement on their LLP license. However, allowing a limited access fishery complicates management and may create a smaller fishery with an intense race to harvest the quota, if it is ever opened to directed fishing. The potential to compete with non-qualified LLP license holders would create an incentive for anyone with more than a minimal amount of quota assigned to their LLP license to join a cooperative.

#### 4.3.2.3 BS and AI

The LAPP could be structured to treat the BS and AI areas as a single allocation or issue separate quota for each area that must be harvested (and perhaps delivered) within the area the quota is designated. Because the trawl CV sector allocation may be harvested in either the BS or the AI under the status quo, the Council may wish to continue to allow that flexibility under a LAPP. In that case a cooperative's quota may be harvested in either the BS or AI if both Pacific cod fisheries are open to directed fishing. If the non-CDQ Pacific cod TAC is or will be reached in either the BS or AI, NMFS will prohibit directed fishing for Pacific cod in that subarea for all non-CDQ fishery sectors. Any unfished cooperative quota would need to be fished in the area that remains open to Pacific cod directed fishing.

**Table 4-7 Trawl CV sector harvests of targeted BSAI Pacific cod in the BS and AI, 2003 through 2018**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
AI																	
Landed Catch (mt)	11,128	11,378	7,466	8,210	12,895	13,945	14,319	12,188	7,535	6,739	5,120	4,554	*	5,573	2,539	4,064	130,390
Landed Catch (%)	33.0%	32.4%	24.6%	26.6%	45.3%	50.6%	56.9%	49.2%	21.8%	16.6%	13.1%	11.6%	*	13.5%	6.8%	12.5%	24.5%
LLP Licenses	17	14	12	15	21	21	17	19	14	14	7	6	4	9	5	10	32
Vessels	17	14	12	15	21	21	17	19	14	14	7	6	4	9	5	9	39
Processing Plants	7	6	5	5	9	9	6	5	4	6	3	3	2	3	3	5	26
BS																	
Landed Catch (mt)	22,622	23,707	22,915	22,670	15,544	13,595	10,847	12,570	27,088	33,795	33,854	34,568	*	35,734	34,548	28,454	401,473
Landed Catch (%)	67.0%	67.6%	75.4%	73.4%	54.7%	49.4%	43.1%	50.8%	78.2%	83.4%	86.9%	88.4%	*	86.5%	93.2%	87.5%	75.5%
LLP Licenses	64	62	59	54	51	49	34	30	48	53	52	51	52	56	62	63	107
Vessels	62	59	55	50	49	47	32	29	47	50	50	46	47	52	58	58	101
Processing Plants	9	9	10	10	9	11	7	5	11	9	10	9	11	17	17	18	33
Total																	
Total Landed Catch (mt)	33,750	35,086	30,381	30,880	28,439	27,540	25,166	24,759	34,622	40,533	38,974	39,122	31,698	41,308	37,087	32,519	531,863
Total Landed Catch (%)	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Total LLP Licenses	71	71	63	58	60	63	48	45	51	58	56	53	52	60	64	66	109
Total Vessels	70	68	59	54	57	61	46	44	50	54	53	48	47	56	60	60	102
Total Processing Plants	10	13	12	11	12	14	10	8	13	11	12	10	11	17	17	19	41

Source: AKFIN summary of CAS data (BSAI\_TRW\_LL\_PCODLANDINGS(5\_16\_2019))

#### 4.3.3 Stacking LLP Licenses

Because more than one LLP license may be assigned to a vessel, the Council should define options for assigning catch history to LLP licenses when more than one LLP license was assigned to the CV at the time the fish were harvested. There are a variety of reasons a vessel may be assigned to more than one

LLP license. For example, the two LLP licenses have a different suite of endorsements that provide the vessel operator greater flexibility in how the vessel is used. This section describes three different methods the Council could consider when assigning catch history to an LLP license when there were more than one on the vessel.

First, if only one of the LLP licenses is endorsed for the area fished or gear used to make the catch, all the catch is assigned to that LLP license. That would be appropriate since it is the only LLP license on that vessels that allowed for the legal harvest of the fish.

Second, if two valid LLP licenses were used to make the harvest in the area the owner of the vessel used to make the landings may choose which LLP license to assign the catch history. This option gives more power to the vessel owner versus the LLP license holder if the ownership of the LLP license changes or the LLP license holder was not the owner of the vessel when the landings were made. To illustrate these issues two examples are provided. In the first case a person owns a vessel and has two LLP licenses on the vessel. The vessel owner sells one of the LLP licenses to another firm. When the catch history is assigned to the LLP license the vessel owner could assign all of the catch history to the LLP license it still owns. The buyer of the LLP license would not receive any catch history associated with the LLP license when it was held by previous owner. In the second case, a person does not own the LLP license but uses it on their vessel to operate in the Pacific cod trawl fishery. If they had two licenses and both had a BS endorsement (they used the leased LLP license to fish in the AI) the vessel owner could apply all their BS Pacific cod catch to the LLP license it owns and only the AI catch would be applied to the LLP license they leased.

The third option would be to divide the catch history equally between the qualified stacked LLP licenses. In this case neither the vessel owner nor the LLP license holder would have the authority to determine how the history is divided. NMFS would assign the history equally to each LLP license. If there were two LLP licenses, each would receive half of the qualifying catch history. This method would be easiest for NMFS to implement, because it could be done using only catch data without applications from the vessel owners.

While the stacking of LLP licenses and the distribution of catch history does not apply in most cases, it is an important decision to the individuals and firms that are subject to the decision. Table 4-8 provides a summary of the catch and participation by number of LLP licenses associated with the catch.

**Table 4-8 BSAI non-CDQ targeted trawl CV Pacific cod catch by number of LLP licenses associated with the catch.**

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
<b>1 LLP license</b>												
Pacific cod (mt)	27,685	25,223	25,527	34,598	39,371	37,703	38,061	27,175	37,781	33,871	31,333	358,328
Pacific cod (%)	98.6%	97.4%	99.8%	99.9%	96.5%	96.7%	97.3%	85.6%	90.6%	90.0%	93.0%	94.8%
<b>2 LLP licenses</b>												
Pacific cod (mt)	405	681	60	24	1,426	1,271	1,060	4,566	3,935	3,770	2,376	19,575
Pacific cod (%)	1.4%	2.6%	0.2%	0.1%	3.5%	3.3%	2.7%	14.4%	9.4%	10.0%	7.0%	5.2%
Vessels	2	2	1	1	3	2	5	5	4	4	6	10
LLP licenses	4	4	2	2	6	4	10	10	8	8	12	21
<b>Total (mt)</b>	<b>28,090</b>	<b>25,904</b>	<b>25,587</b>	<b>34,622</b>	<b>40,797</b>	<b>38,974</b>	<b>39,122</b>	<b>31,741</b>	<b>41,716</b>	<b>37,641</b>	<b>33,709</b>	<b>377,904</b>

Source: AKFIN summary of CAS data

#### 4.3.4 Pacific Cod Transfers with AFA Cooperatives

An issue that has been identified during preliminary discussions of the cooperative program is how to address Pacific cod transfers that have occurred within AFA cooperatives. AFA cooperatives are allowed to harvest up to a given amount of Pacific cod as defined by their sideboard limits which are based on members Pacific cod history used to determine the sideboards. Once in the cooperative, the cooperative

members may determine how to harvest the available Pacific cod. Those decisions have resulted in cooperative members leasing Pacific cod to facilitate the efficient harvest. Under a cooperative program where Pacific cod catch history is assigned to an LLP license those transfers have long term implications relative to who is assigned catch history under a new LAPP.

In determining how to address this issue, the Council should consider that limited quantitative information can be provided. Staff does not have access to cooperative contracts or individual contracts that provide information on the terms and conditions of transfers that have occurred. The data available only indicates how much catch was associated with an LLP license or a vessel. The data does not provide any information on how the cooperative determined how much Pacific cod the member would be allowed to harvest.

Double counting catch to credit both the person leasing the cooperative quota and the person harvesting the quota would likely be a contentious issue and staff does not have data to provide the additional information that is needed. The lack of quantitative information means that the cooperatives would either need to provide additional, comprehensive information to the analysts on the structure and use of transfers within the cooperative or the cooperative would need to address the issue internally after Pacific cod allocations are made.

If the AFA sector wanted to move forward with allowing catch history to be double counted, it could negatively impact persons that did not lease within the AFA sector and non-AFA sector participants. Both groups would have the same catch history, but the entire amount of catch history would be inflated, resulting in a decrease of their allocation. To resolve the issue for the non-AFA sector, the Council could consider splitting the BSAI Pacific cod sector allocation between the AFA/non-AFA sectors prior to adjusting AFA catch history. Depending on the structure of the split between the two sectors, this could protect the non-AFA vessels from lease compensation adjustments. AFA firms that had not leased Pacific cod could still be negatively impacted, if they are unable to negotiate an agreement to protect themselves.

#### 4.4 Seasonal Allocations

##### Topics of Council consideration:

- **Would seasonal allocations change/ be necessary under a LAPP?**
- **Are there any expected Steller sea lion implications if it is a directed fishing allocation that could be harvested any time during the year? Most of the directed fishing is currently taken in the A season and the LAPP may spread out the A season harvest.**

Allocations of Pacific cod to the CDQ Program and to the non-CDQ fishery sectors are apportioned by seasons. The trawl CV sector allocation is apportioned among three seasons that correspond to the early (A-season), middle (B-season), and late (C-season) portions of the year.

- A-season runs from January 20 – April 1 and is allocated 74 percent of the sector allocation.
- B-season runs from April 1 – June 10 and is allocated 11 percent of the sector allocation.
- C-season runs from June 10 – November 1 and is allocated 15 percent of the sector allocation.

Tables provided throughout the document have included catch from all three seasons because the Council's purpose and need statement did not specify that the LAPP would be limited to only the A-season or the A-season and B-season. Further breakouts of the data could be provided if that is the intent of the Council.



This section focuses on the catch by season to show participation levels. Table 4-9 shows that about 88 percent of the BSAI Pacific cod catch in the non-CDQ Pacific cod trawl CV Pacific cod target fishery was taken in the A season from 2003 through 2018. On an annual basis the catch ranged from over 99 percent to about 80 percent. Indicating that the majority of the catch is always taken in the A season. The data also indicates that small amounts are taken in the C season, with an average of over 2 percent reported.

**Table 4-9 BSAI Pacific cod catch in the non-CDQ Pacific cod trawl CV Pacific cod target fishery by season, 2003 through 2018.**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
A Season																	
Pacific cod (mt)	32,202	32,050	27,564	27,965	24,685	24,696	22,621	25,466	31,865	33,865	33,512	35,097	28,532	36,953	34,805	27,637	479,515
Pacific cod (%)	80.58%	86.14%	89.15%	86.21%	84.68%	87.92%	87.33%	99.53%	92.03%	83.01%	85.98%	89.71%	89.89%	88.58%	92.47%	81.99%	87.57%
Vessels	75	67	62	54	52	59	49	48	47	52	49	46	47	53	57	61	118
B Season																	
Pacific cod (mt)	5,375	2,516	3,058	c	4,364	3,358	c	c	1,962	6,318	4,146	3,687	1,415	3,044	2,745	c	55,422
Pacific cod (%)	13.45%	6.76%	9.89%	c	14.97%	11.95%	c	c	5.67%	15.49%	10.64%	9.42%	4.46%	7.30%	7.29%	c	10.12%
Vessels	53	42	35	41	49	50	31	2	31	33	21	16	18	27	27	33	100
C Season																	
Pacific cod (mt)	2,387	2,641	298	c	101	37	c	c	796	614	1,317	338	1,794	1,719	91	c	12,647
Pacific cod (%)	5.97%	7.10%	0.96%	c	0.35%	0.13%	c	c	2.30%	1.51%	3.38%	0.86%	5.65%	4.12%	0.24%	c	2.31%
Vessels	15	16	3	2	4	6	1	1	4	7	3	3	4	4	8	2	37
Annual Total																	
Pacific cod (mt)	39,963	37,207	30,920	32,440	29,150	28,090	25,904	25,587	34,622	40,797	38,974	39,122	31,741	41,716	37,641	33,709	547,585
Pacific cod (%)	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Vessels	86	78	64	57	64	65	54	48	50	55	53	48	48	56	61	65	123

Source: AKFIN summary of CAS data

While there are modest amounts of Pacific cod taken in the B and C seasons, adjustments in the amounts allowed should take into consideration Steller sea lion protection measures. Table 5 to 50 CFR 679 define protection areas for Steller sea lions in the Pacific cod fishery. Likely any change to the season dates or percentages could trigger a consultation, but the level of change will likely determine if it is a formal or informal consultation.

#### 4.5 Processors and Communities Considerations

##### Topics of Council consideration:

- **Should the Council include options to promote sustained participation of processors and/or communities participating in the BSAI Pacific cod fishery?**
- **If options are to promote sustained participation, what approach should be utilized?**
- **What amount of BSAI Pacific cod is necessary for sustained participation of processors and communities?**
- **If processor and/or community approaches are used to promote sustained participation, should options be included to prevent stranded BSAI Pacific?**

As the Council begins developing alternatives and options for trawl CV sector LAPP, the Council is required to consider a variety of factors, including promotion of sustained participation for processors and communities among others. As noted in Section 2.2, the Council is required to establish procedures to ensure fair and equitable initial allocations, including consideration of

- (i) current and historical harvests
- (ii) employment in the harvesting and processing sectors
- (iii) investments in, and dependence, upon the fishery; and
- (iv) current and historical participation of fishing communities.

As stated in MSA (see Section 2.1), the Council must also consider the basic cultural and social framework of the fishery in allocating harvest privileges. As part of that consideration it should focus on the development of policies to promote the sustained participation of small owner-operated fishing vessels and fishing communities that depend on the fisheries, including regional or port-specific landing or delivery requirements.

In addition, the MSA at §303A(c)(5)(C) requires the Council, where necessary and appropriate, to include measures to assist entry level and small vessel owner-operators, captains, crew, and fishing communities through set asides of harvest allocation or economic assistance in the purchase of shares.

Based on these MSA requirements and guidance, this section begins a discussion of port and regional delivery activity, considers provisions that may protect historical processor and community relationships with the BSAI Pacific cod fishery, and examples specifically for the AI shoreside processor sustainability. Note that throughout this section the community activities discussed, and the provisions suggested to promote community engagement refers to the community's relationship with BSAI Pacific cod trawl CV processing. While communities may also have an association to this fishery through other avenues (e.g. homeporting trawl CV vessels, the home community of captain/ crew, vessel owners, business associates, support service communities, etc.), the community interactions discussed in this section are specific to the community benefits and impacts (e.g. tax revenue and economic activity) associated with the sustained landings and processing of BSAI Pacific cod.

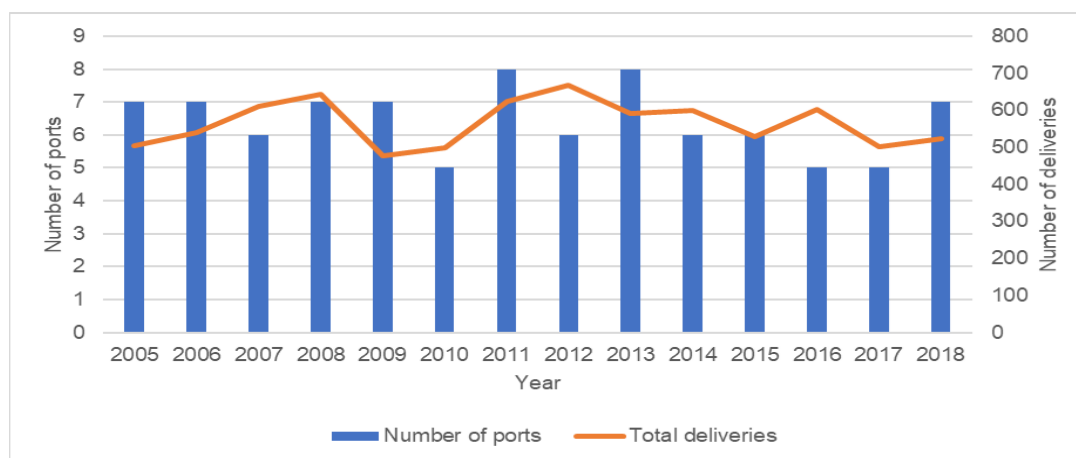
#### 4.5.1 Port/Region Activity

The ports that have received deliveries of trawl CV Pacific cod from the BSAI between 2005 through 2018 include:

- Adak
- Akutan
- Dutch Harbor/Unalaska
- King Cove
- Sand Point
- Anchorage

Figure 4-1 and Table 4-10 provide additional general information the number of ports and total number of deliveries of the targeted BSAI Pacific cod by the trawl CV sector from 2005 through 2018.

**Figure 4-1 Total number of deliveries of targeted BSAI Pacific cod and total number of ports of delivery for the trawl CV sector from 2005 through 2018**



Source: AKFIN, May 2019

Figure originates from Excel file Tables and Figures for BSAI cod Allocation Review June 2019

**Table 4-10 Total number of deliveries of targeted BSAI Pacific cod and total number of ports of delivery for the trawl CV sector from 2005 through 2018**

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Number of ports	7	7	6	7	7	5	8	6	8	6	6	5	5	7
Total deliveries	505	539	611	644	478	498	625	667	592	600	529	603	502	522

Source: AKFIN, May 2019

Table originates from Excel file Tables and Figures for BSAI cod Allocation Review June 2019

This paper does not provide data on individual ports or regions receiving Pacific cod landings due to confidentiality concerns. Most of the ports receiving BSAI Pacific cod only have one processor and providing data at that level is prohibited. If aggregations of data were provided by region, it could limit the Council's options to specific regions in the future. Once additional direction is provided by the Council, information can be aggregated to provide some information if the Council wishes to consider regional or port specific landings requirements to protect communities and processors.

#### 4.5.2 Processor and Community Considerations

In considering whether allocations of BSAI Pacific cod to the trawl CV sector give adequate consideration to current and historical participation of fishing communities and processing sectors, the following sections provide a brief overview of different approaches the Council could consider to provide for processor and community program participation that are dependent on the BSAI Pacific cod fishery. These concepts are not mutually exclusive. For instance, the Council may include more concrete connections, such as a cooperative/ processor linkage or direct allocation of some of the harvester privileges to processors. The Council may also consider connections such as regional or port specific landing requirements to address community interests.

The Council is also directed to consider procedures to prevent excessive geographic consolidation in the harvesting and processing sectors as part of its efforts to consider the cultural and social framework of the fishery. Overall, these provisions are intended to ensure the Council considers historic community interests in the fisheries, but not to a level that leads to excessive geographic consolidation. In addition to the potential for processing share caps (see Section 4.6), regionalization or port of landings requirements could be ways to ensure diversity in processing continues.

##### 4.5.2.1 Cooperative/ Processor Linkages

One approach that could be utilized to promote sustained participation for historical processors is a cooperative/ processor association. For example, in the Central GOA Rockfish Program, the CV cooperative may only form if a "rockfish processor" is an "associate" of the rockfish cooperative and is designated on the application for cooperative quota. In the Central GOA Rockfish Program, a processor is any shoreside processor with a Federal processor permit that receives groundfish harvested under the authority of a rockfish cooperative quota permit. In order to receive rockfish cooperative quota, the shorebased processor must be located within the boundaries of the City of Kodiak. Depending on the goals for the trawl CV management program, the Council might consider a similar structure of cooperative/processor associations to provide protections for both processors and communities. This approach would likely be more applicable if the Council envisioned a unique processor linkage to each active shoreside and offshore processor. For example, under a single or two cooperative approach (AFA/non-AFA or inshore/offshore cooperatives), a cooperative/ processor linkage approach would likely not work since there are more than two shoreside and offshore processors active in the BSAI Pacific cod fishery.

##### 4.5.2.2 Allocation of Harvest Shares to Processors

Another approach for promoting sustained participation of processors and impacts to those communities where shoreside processors are located is to allocate harvest shares to processors. Under this approach, the Council would select a fixed percentage of the trawl CV harvest share pool for allocation to harvesters

based on their qualifying harvest history, with the remainder allocated to processors based on their qualifying processing history. Under this approach, allocations of BSAI Pacific cod and PSC would be divided between the two groups at a prescribed percentage. The processor port of the harvest share pool would be allocated to eligible processors based on individual processing histories in the target BSAI Pacific cod fishery during qualifying years. Processors would be responsible for contracting out the harvest of their allocation.

#### **4.5.2.3 Limiting Deliveries to C/Ps Acting as a Mothership**

The Council took final action in April 2019 to limit the number of C/Ps that may take directed non-CDQ BSAI Pacific cod deliveries from trawl CVs. It is assumed those are the only C/Ps that would be allowed to take cooperative deliveries of Pacific cod under this action, without further direction by the Council. The Council could consider additional limitations on which trawl CVs could deliver to those C/Ps as part of the proposed LAPP. Limitations could be structured to ensure that the longer season under a cooperative structure could not be utilized to increase deliveries to C/Ps. Examples of provisions that could be considered are:

- allowing only CVs that have delivered to C/Ps acting as a mothership in the past to deliver cooperative quota to a qualified C/P, and
- limit the amount of cooperative quota that can be delivered to the C/P acting as a mothership to the amount of cooperative quota the CV brought into the cooperative.

The Council and industry could develop other options to consider, without reopening the action the Council just approved in April 2019. The goal would be to protect shorebased processors and communities from increasing proportions of the BS or AI Pacific cod landings being delivered to C/Ps acting as a mothership.

#### **4.5.2.4 Regionalization**

The Council may wish to consider requiring that a percentage of the trawl CV allocation be delivered to a specified geographic region. This approach could be an effective method for addressing ongoing challenges by providing stability for CVs harvesting AI Pacific cod, AI shoreplant operations, and AI fishing communities dependent on AI Pacific cod harvesting and shoreside processing activity.

This approach was taken in the Crab Rationalization Program where the regional delivery requirements for harvesting quota share and processing quota share were implemented to help preserve the historic geographic distribution of landings and resultant fishery revenues in fishery-dependent economies. Two regional designations (North- requiring landings north of 56° 20' north latitude and South- requiring landings in any other area) were created in most Crab Rationalization Program fisheries, with a Western delivery requirement (requiring landings west of 174° W. longitude) for some quota in one of the crab fisheries. For example, to provide AI community protections, the Council could consider requiring a defined percentage of the sectors BSAI Pacific cod harvested quota be landed in a community adjacent to the AI waters west of 170° W. longitude.

A potential challenge with this approach is that a regional requirement could create a situation requiring delivery of Pacific cod to one processor, which could exceed the Council's authority granted under the MSA. For example, if Adak was the only operational shoreside processor in the AI region, then harvesters would be required to deliver their Pacific cod to that one shoreside processor which could be considered a harvester/processor linkage that could exceed the Council's authority. The Crab Rationalization program's Northern and Western regionalization requirements currently result in the delivery of crab to only one processor in each region; however, the authority for the Crab Rationalization Program and the regional delivery requirement were authorized by Congress.

#### 4.5.2.5 Port of Landings Requirements

Port of landings requirements may be an effective tool for providing sustained participation for shoreside processors and their associated communities, but this approach may create a similar requirement that harvesters deliver Pacific cod to a specific processor if there is only one processor at the port. For example, since there is only one shoreside processor operating in Adak, a port specific delivery requirement to the port of Adak could be beyond the Council's authority granted under the MSA. A port of landings requirements may be effective and implementable in ports with multiple processors like Unalaska/Dutch Harbor. However, in many areas of the BSAI, a port of landing requirement may require additional authority from Congress to implement. In addition, trawl CVs that are required to deliver to a single shoreside processor could lose market power, which could be reflected in the ex-vessel value they receive for deliveries.

#### 4.5.3 AI Pacific Cod Shoreside Sustainability

During the June 2019 meeting, the Council requested a discussion of trawl CV harvests and deliveries in the AI Pacific cod fishery and the set-aside provisions established in Amendment 113. Below is a summary of Amendment 113 and different approaches the Council could utilize to provide processor and community protections that are specific to AI shoreplants and communities.

##### 4.5.3.1 Amendment 113

In October 2015, the Council recommended a management measure (Amendment 113) to provide stability to AI shoreplant operations and the communities dependent on shoreside processing activity. The amendment modified the management of the BSAI Pacific cod fishery to set aside a portion of the AI Pacific cod TAC for harvest by CVs directed fishing for AI Pacific cod and delivering their catch for processing to a shoreside processor located on land west of 170° W longitude in the AI ("AI shoreplant"). The Secretary approved the Council's recommendation, which had an effective date of November 23, 2016. Under Amendment 113, the harvest set-aside applies only if specific notification and performance requirements are met, and only during the first few months of the fishing year. This harvest set-aside was intended to provide the opportunity for vessels delivering onshore, AI shoreplants, and the communities where AI shoreplants are located to receive benefits from a portion of the AI Pacific cod fishery. The notification and performance requirements preserve an opportunity for the complete harvest of the BSAI Pacific cod resource if the set-aside is not fully harvested or if AI shoreplants are unable to accept deliveries of Pacific cod in any given fishing season.

The first full year the AI Pacific cod set-aside could have applied was 2017, but neither the City of Adak nor the City of Atka provided NMFS with notice of intent to process AI Pacific cod by late 2016, as required by the regulations implementing Amendment 113. As a result, the AI Pacific cod set-aside did not apply in 2017. For 2018 and 2019, the City of Adak provided NMFS with timely notice and AI Pacific cod set aside was utilized. In 2018 and 2019, NMFS announced that the 5,000 mt AI set aside had not been fully landed by March 15<sup>th</sup> and therefore the AI set-aside would not apply for the remainder of the year. The amount of the 5,000 mt AI set-aside that was delivered to the AI shoreplant in 2018 and 2019 cannot be reported using Federal or State data due to confidentiality restrictions.<sup>12</sup>

On March 21, 2019, the U.S. District Court for the District of Columbia (Court) ruled that NMFS failed to demonstrate that the rule implementing Amendment 113 satisfied the requisite standards for such regulatory measures set forth by the MSA. Specifically, the Court found NMFS had not demonstrated the rule implementing Amendment 113 was reasonably calculated to promote conservation consistent with

---

<sup>12</sup> Golden Harvest Alaska Seafood, LLC in a public comment letter to the NPFMC in April 2018 noted that "landings from the Federal fishery were 4,010 mt; or about 80 percent of the AI CV Harvest Set Aside." <http://comments.npfmc.org/CommentReview/DownloadFile?p=48236946-a5e9-42fa-977a-b723217e1a66.pdf&fileName=GHAS%20to%20NPFMC%20033018.pdf>

National Standard 4, and that NMFS could not show consistency with National Standard 8 because in the Court's view the rule allocates fishery resources to two particular communities. The Court vacated the rule implementing Amendment 113 and remanded the rule to NFMS for reconsideration consistent with the Court's opinion. Therefore, at present Amendment 113 has no force or effect of law.

#### **4.5.3.2 AI Pacific Cod Port-specific or Regional Landing Requirement**

The Council could develop alternatives and options that include setting aside a portion of the BSAI Pacific cod trawl CV allocation for a port-specific or regional landing requirement, if designed in such a way as to avoid exceeding the authority granted under the MSA. A port-specific or regional landing requirement would ensure that a predetermined percentage of the sector's QS would be delivered to defined AI shoreplants as allowed under the MSA.

One shortcoming of a port-specific landing requirement could be its rigidity given the potential for changes in the number of shoreside processors and their associated ports in the AI in the future. In contrast, a regional landing requirement to shoreside processors located on land west of 170° W. longitude would allow more flexibility for AI shoreside processors changes. For example, if in the future, Atka expands its existing processing capacity to include Pacific cod, a regional delivery requirement is broad enough to include Atka since the port is west of 170° W. longitude.

In utilizing a port-specific or regional landing set aside for the AI shoreside processors, there are likely several different elements that the Council should consider.

- The first element the Council should consider if it develops a regional landing requirement is the percentage or the amount of Pacific cod quota that a cooperative would be required to set aside for delivery to AI shoreside processors. As a reference point, Amendment 113 set aside an amount equal to the lesser of either the AI directed fishing allowance (DFA)<sup>13</sup> or 5,000 mt.
- Another factor the Council should consider is whether the set aside is specific to a season or the entire fishing year. A specific A-season set aside delivery period could concentrate the set-aside during the winter Pacific cod fishery when the fish are aggregated which allows greater harvest efficiency by trawl vessels but forces trawl CVs to a narrow regulatory delivery window which could limit flexibility for both harvesters and processors. Extending the set aside for the entire fishing year could provide greater flexibility for both trawl CVs and AI shoreside processors to work cooperatively to maximize benefits while reducing costs for both harvesters and shoreside processors.
- A third decision the Council would need to consider in developing an AI set aside is whether a Pacific cod delivery requirement is specific to BS or AI Pacific cod TAC. Nearly all the Pacific cod delivered to AI shoreside processors in the past has been from the AI

The Council could also consider including options for a cooperative to deliver Pacific cod to non-AI shoreside processors in the event there are no AI shoreside processors at the beginning of the fishing season to process the AI set aside or insufficient shoreside processing capacity to process all the AI set aside. Since the AI currently has only one shoreside processor that can process large amounts of AI Pacific cod, an AI Pacific cod set aside requirement that does not have some ability to allow for a cooperative to deliver their Pacific cod to other processors in the event of no operational AI shoreside processors or limited operational capacity could result in all or some of the set aside to remain unharvested. One potential option would be to utilize the approach in Amendment 113 which required notification of the intent to process and a performance standard. The notification element required the City of Adak or the City of Atka to notify NMFS by November 1 of the intent to process non-CDQ

---

<sup>13</sup> The AI subarea directed fishing allowance is the TAC minus the ICA and CDQ allowance.

directed AI Pacific cod in the upcoming year. If the cities had failed to notify NMFS of the intent to process AI Pacific cod, then the set aside would be suspended for the upcoming year and the cooperative could deliver BSAI Pacific cod to any processor. The performance standard for AI shoreplants required that the processor receive 1,000 mt or more of the set aside prior to February 28<sup>th</sup> otherwise the set aside would be suspended for the remainder of the year thus allowing a cooperative the flexibility to deliver their Pacific cod harvest to any processor. The Council's intent for including a notification process and a performance standard for AI shoreplants was to address the potential for unharvested AI Pacific cod while also providing for the sustained participation of AI shoreside processing activity and remote fishing communities in the AI.

Another approach for addressing the absence of a reliable shoreside processor for the AI Pacific cod set aside would be the development of a contractually defined exemption similar to the Western AI gold king crab (WAG) fishery (Amendment 37). In the WAG fishery, a portion of the harvesting quota is designated for delivery and processing west of 174° W. longitude. To address the potential lack of processing capacity for the portion of harvesting quota designated for delivery and processing west of 174° W. longitude, the Council developed, and NMFS implemented an exemption to the regional landing requirement. Eligible participants can submit an application to NMFS at any time during the crab fishery. Once the application is completed, NMFS exempts the WAG quota from the west regional delivery for the remainder of the crab fishing year. Signatories include identified quota shareholders, processor quota shareholders, and municipalities who are eligible to apply for an exemption. This approach provides the flexibility necessary for eligible contract signatories to request an exemption at any point during the crab fishing year. This same approach could be utilized to accommodate the potential situations where there is no operational AI shoreside processor if an AI set aside requirement is include in a trawl CV LAPP.

#### **4.5.3.3 Allocation of Harvester Quota to AI Shoreplants**

Another option is for the Council to assign annual harvester shares to the AI shoreplants. Under this approach, AI shoreplants could be allocated a set percentage of the non-CDQ BSAI Pacific cod trawl CV sector allocation. The Council would need to determine the appropriate percentage of the sector allocation to allocate to the shoreplant(s). Through an allocation of harvesting quota to processors:

- Harvesting quota would only be allocated during years when the AI shoreplant(s) notify NMFS that they will be operating.
- Harvesting quota could only be delivered to AI shoreplants that are issued QS, unless the AI shoreplants agree to CVs delivering the fish elsewhere.
- The shoreplants would likely lease the catch shares resulting from their harvesting quota to trawl CVs to harvest the catch shares.

One issue that would need to be addressed under this structure is how the harvesting quota would be divided up among shoreplants if a new shoreplant was built in the AI in addition to the existing shoreplant in Adak. In that case, the Council will need to develop an allocation formula that is not based on history, since the new shoreplants will not have had history in the fishery. This issue will likely be contentious and if more shoreplants enter the fishery it could lead to requests for ever increasing percentages of the BSAI trawl CV sector allocation being assigned to the AI shoreside processors.

#### **4.5.3.4 An AI Regional Fishing Association**

Another approach for promoting sustained participation for communities would be to develop a regional fishing association (RFA) whose board of directors includes representation from communities in the AI west of 170° longitude that have a processor that notifies NMFS they intend to process Pacific cod the following year. The MSA defines an RFA and the requirements for one to form in Section 303A(c)(4). To be eligible to participate in a LAPP to harvest fish, a regional fishery association must

- be located within the management area of the relevant Council;
- meet criteria developed by the relevant Council, approved by the Secretary, and published in the **Federal Register**;
- be a voluntary association with established by-laws and operating procedures;
- consist of participants in the fishery who hold QS that are designated for use in the specific area covered by the regional fishery association, including... processing or fishing communities;
- not be eligible to receive an initial allocation of a limited access privilege but may acquire such privileges after the initial allocation, and may hold the annual fishing privileges of any limited access privileges it holds or the annual fishing privileges that members contribute; and
- develop and submit a regional fishery association plan to the Council and the Secretary for approval based on criteria developed by the Council that have been approved by the Secretary and published in the Federal Register.

If members fail to comply with the plan the Secretary “shall” deny or revoke limited access privileges granted. This provides NMFS and the Council a continued oversight role in the process.

As stated in the MSA, an RFA is not eligible to be initially allocated harvesting privileges, thus if the Council pursues this option and established RFAs, it may allow this AI community organization to buy in to a Pacific cod trawl CV LAPP. Catch history could be acquired through purchases or donations from existing LLP license holders that are allocated harvesting privileges. Those harvesting shares could be held by the RFA which would determine internally determine who would harvest these shares and where they would be processed. Thus, this option provides more annually flexibility for adjustments based on the number of processors available. However, it also runs the risk of providing no regional benefits if the RFA cannot afford to acquire harvesting quota and may also lead to contagious decisions about who would be harvesting the allocation.

#### 4.6 Ownership and Use Caps

##### Topics of Council consideration:

- **How will the Council address the MSA requirement for excessive share caps?**
  - **At what percentage of the harvesting pool should an ownership cap be set?**
  - **How should partial holdings be evaluated (e.g. individually and collectively)?**
  - **Should those with higher levels of participation be “grandfathered in” at that allocation?**
- **Should there be a vessel use cap, limiting the amount an individual vessel can harvest in a year?**
  - **If so, what level should the vessel cap be set?**
- **Should there be cooperative ownership/ use caps, limiting the amount of harvesting privileges a cooperative can hold overall or use in a year?**
- **Should there be processing use caps, limiting the amount of harvesting privileges that can be processed at one plant?**



→ Is the Council concerned about BSAI trawl CV fishing opportunities consolidating onto AFA vessels?

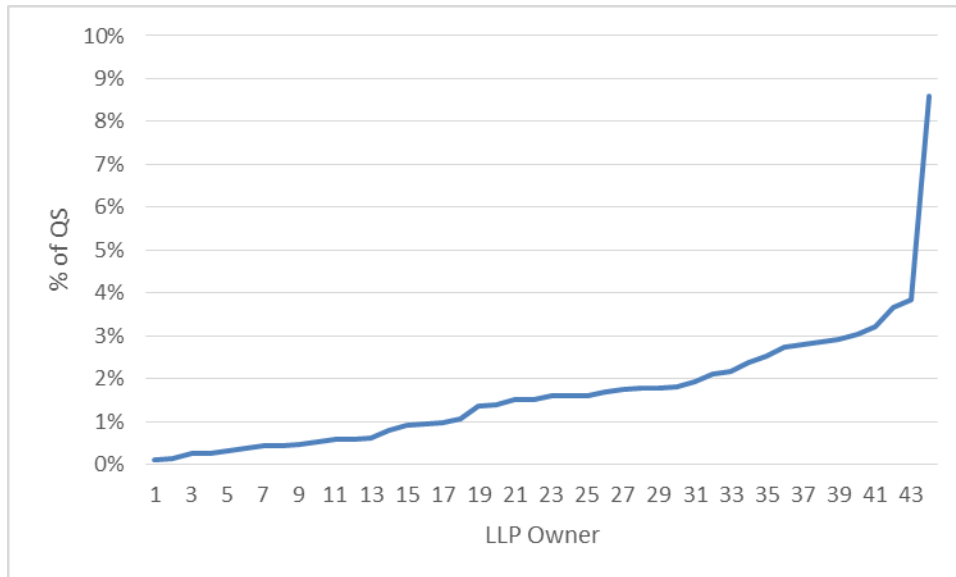
Along with the assignment of Pacific cod trawl CV catch history to LLP licenses, the proposed action could incentivize the stacking of LLP licenses on vessels, transfer of quota within the cooperative to more efficient vessels, and the consolidation of ownership to promote the efficient harvest of that Pacific cod catch history. Given this motivation for consolidation of harvesting privileges, all LAPPs must consider excessive share provisions as part of the program.

If it is appropriate to establish excessive share caps for the program, the Council must define how these caps are calculated and applied. An ownership cap is generally applied as a percentage of the total pool of quota that an individual may hold and/ or acquire. Many programs have “grandfather provisions” that allow participants that have been operating at higher rate of participation continue to operate at that level, while ownership caps bar them from acquiring additional harvesting privileges and further exceeding the caps.

In the sablefish and halibut IFQ Program, ownership caps are typically calculated by summing all of the QS units or IFQ pounds held by that person and their percentage of direct or indirect ownership in any entity that holds QS or IFQ. This method of determining when a cap is reached is often referred to as the “individual and collective” rule. The way the calculation works for individuals, for example, is that an individual who holds 100 pounds of IFQ and has a 5 percent interest in a company that holds 100 pounds of IFQ, the amount of IFQ that person would be considered to hold for use cap calculation is 100 pounds (their personal holdings) plus 5 pounds (5 percent of 100 pounds - their ownership interest in that company) for a total 105 pounds.

In the Crab Rationalization Program, NMFS accounted for both harvesting and processing shares, so the accounting method is somewhat different. For a corporation, partnership, or other non-individual entity that holds QS or IFQ and also holds PQS or IPQ, NMFS uses a 10 percent threshold rule. In this case, the use cap is equal to all of the QS or IFQ held by that person and all of the QS or IFQ held by any entity in which that non-individual has a 10 percent or greater direct or indirect ownership interest. For example, a corporation that holds 100 pounds of IFQ and has a 15 percent interest in a company that holds 100 pounds of IFQ, would be considered to hold 200 pounds of IFQ for use cap calculation. If that same non-individual held 9 percent of a company that holds 100 pounds of IFQ, none of that IFQ would count against the firm’s cap.

To provide information for the proposed trawl CV Pacific cod LAPP, the targeted BSAI Pacific cod catch by LLP holder was aggregated for the years 2012 through 2018. The four addresses with the most and least catch (greater than zero) were averaged. The results are reported in Figure 4-2. The four addresses associated with LLP licenses that were reported to have been assigned the most catch averaged 8.6 percent of the sector’s catch (or over 34 percent in total). The address associated with the fifth greatest catch was 3.8 percent. This provides some context on appropriate ownership caps depending on the Council’s goals and objectives. For example, if the ownership cap was set at 4 percent and the four firms above the cap were grandfathered in at their historical level, about 20 firms could hold all of the QS.

**Figure 4-2 Percentage (2012 through 2018) of targeted BSAI CV trawl Pacific cod associated with LLP licenses with the same mailing address**

Note: The four smallest and largest amounts were averaged to protect confidential information.

In addition to the ownership caps described in this section, persons are currently limited to holding 10 groundfish LLP licenses unless they were grandfathered to hold more at the time of the initial allocation. A person that was grandfathered to hold more than 10 groundfish LLP licenses may not acquire a new LLP license unless the new LLP license would not result in the person holding more than ten LLP licenses after the transaction is complete. An LLP license may be transferred only once per calendar year.

The Council may also consider establishing a vessel use cap, a cooperative ownership and/ or use cap, and processor use caps. A vessel use cap restricts the pounds that can be consolidated and harvested on one vessel during the year. This is a measure the Council may consider if it wanted to limit the level of consolidation that could occur or as a provision to protect captain/crew employment. As demonstrated in Table 3-2, not all cooperative programs include this type of provision (they are included in AFA, Amendment 80 and the Rockfish Program, not applicable for vessels in the Crab Rationalization Program if they are part of cooperative). Further analysis would need to be done to evaluate the distribution of harvest across the trawl CV sector in order to understand what would define minimum number of vessels that would be required to fish within the cooperatives to harvest the entire allocation.

A cooperative ownership cap would restrict the amount of harvesting privileges that could be associated with a cooperative (the converse of a requirement that a certain percent of the total harvesting privileges would be needed to establish a cooperatives; as described in Section 4.2.2.2). A cooperative use cap would restrict the amount of harvesting privileges that could be fished by one cooperative. The Rockfish Program includes a CV cooperative use cap which limits both how much a CV cooperative may hold or use of primary rockfish species cooperative quota in that program.

Processing caps exist for the Crab Rationalization Program, AFA and the Rockfish Program. This type of cap would restrict how much of the harvesting privileges may be received or processed at a processor. For example, a rockfish processor may not receive or process an amount of sablefish harvested with CQ assigned to the CV sector greater than 30.0 percent of sablefish CQ issued to the catcher vessel sector during a calendar year (see Table 3-2 for the details for each program).

In addition to consolidation at the firm-level, the proposed action may incentivize consolidation of LLP licenses at the sector level (i.e. AFA versus non-AFA). As demonstrated in Table 3 and Table 1-1, the majority of BSAI Pacific cod harvested in the trawl CV sector is routinely harvested by AFA vessels. Without specific Council action, consolidation may result in non-AFA LLP licenses being purchased and stacked onto AFA vessels, along with AFA-derived LLP licenses. While the non-AFA LLP license with Pacific cod catch history could always be separated and transferred for use by a non-AFA vessel, this type of consolidation could diminish entry opportunities for non-AFA vessels to participate in this sector of fishing. The Council should determine whether this is a concern.

If there is a concern, future analysis could examine ways to prevent this type of consolidation. For example, the Council may consider separating the AFA and non-AFA Pacific cod trawl CV allocations while still developing a similar LAPP for both sub-sectors or the Council could consider prohibiting AFA vessels from using non-AFA trawl LLP licenses that have Pacific cod trawl CV catch history assigned.

#### 4.7 Sideboard Limits

##### Topics of Council consideration:

- **Should any new sideboard limits be established?**
  - **If so, would there be any exemptions?**
- **Should existing BSAI Pacific cod sideboard limits be eliminated?**

As explained in Section 4.3.2.1, sideboards have been established in some of the North Pacific LAPPs to prevent those receiving harvesting privileges from using the flexibility granted by this allocation to expand into other fisheries at levels that exceed their historic participation. The AFA program is the only BSAI groundfish LAPP that has established CV sideboard limits. The Central GOA Rockfish Program established CV sideboards for rockfish species in the Western GOA and West Yakutat District that apply during July. The Crab Rationalization Program also established groundfish sideboards for CVs. The CV sideboard limits that have been developed for previous LAPPs as well as the potential need for sideboard limits as part of the proposed Pacific cod programs are discussed in this section.

##### 4.7.1 AFA Sideboards

The final rule implementing the AFA established several species sideboard limits for vessels that are authorized to harvest pollock in the Bering Sea. These sideboard limits were established to protect the interests of fishermen and processors who do not directly benefit from the AFA from those fishermen and processors who received exclusive harvesting and processing privileges under the AFA. Historically, some of these sideboard limits have been implemented through directed fishing closures in regulation when the size of the sideboard limit would not support a directed fishery while other sideboard limits that were open to directed fishing were implemented through the annual harvest specifications process.

Regulations to streamline and simplify NMFS's management of AFA groundfish sideboard limits were published under 84 FR 2723, which became effective on March 11, 2019. After passage of the AFA, NMFS was required to calculate numerous sideboard limits as part of the annual BSAI and GOA harvest specifications process and publish those limits in the **Federal Register**. Simultaneously, NMFS would prohibit directed fishing for the majority of the groundfish species subject to these sideboard limits because most sideboard limits are too small each year to support directed fishing. Rather than continue this annual process of calculating all sideboard limits and then closing most of the groundfish species with sideboard limits to directed fishing, the Council approved and the Secretary implemented a rule (referred to here as the "Small Sideboard action") to prohibit directed fishing by non-exempt AFA vessels for those groundfish species and species groups subject to sideboard limits that had not been opened to

directed fishing and that are not expected to be opened to directed fishing in the foreseeable future. As part of the rule NMFS ceased calculating and publishing the relevant sideboard limits in the BSAI and GOA groundfish harvest specifications.

#### 4.7.1.1 AFA Sideboards in the BSAI

The analysis developed for the Small Sideboard action indicated that in the BSAI only the Pacific cod trawl gear CV sector allocation sideboard and the yellowfin sole sideboard fisheries would not be affected by the proposed action (Table 4-11) (NPFMC, 2018). If the Council implements a BSAI Pacific cod trawl CV LAPP, as suggested in the proposed action, the AFA sideboards for the BSAI Pacific cod trawl CV fishery may no longer be necessary.

The BSAI yellowfin sole fishery is discussed in more detail in Section 4.7.3. All other BSAI non-pollock fisheries would continue to be closed to fishing by AFA CVs due to the implementation of the Small Sideboard action.

**Table 4-11 AFA sideboard limits open for directed fishing along with their AFA CV BSAI sideboard ratios, 2011-2017 average sideboard limits (mt), and 2017 sideboard limit (mt)**

Target species and gear	Area/Season	Sideboard ratio <sup>1</sup>	2017 TAC <sup>3</sup> (mt)	2017 sideboard limit (mt)	Average sideboard limit (2011-2017) (mt)
Pacific cod trawl gear CV	BSAI Jan 20 - Apr 1	0.8609	34,962	30,099	31,309
	BSAI Apr 1 - Jun 10	0.8609	5,197	4,474	4,654
	BSAI Jun 10 - Nov 1	0.8609	7,087	6,101	6,346
Yellowfin sole <sup>2</sup>	All	0.0647	154,000	no sideboard limit	no sideboard limit

Source: NMFS

<sup>1</sup>Determined using a ratio of 1995 to 1997 AFA CV catch to 1995 to 1997 TAC

<sup>2</sup>The sideboard limit for BSAI yellow fin sole is suspended when the initial TAC is equal to or greater than 125,000 mt in order to allow AFA sectors the potential to expand their harvest in the yellow fin sole fishery in periods of diminished availability of pollock (§ 679.64(a)(1)(v) and § 679.64(b)(6)).

<sup>3</sup>All Pacific ocean perch, and BSAI Atka mackerel, flathead sole, Pacific cod, and rock sole are multiplied by the remainder of the TAC of that species after the subtraction of the CDQ reserve under § 679.20(b)(1)(ii)(C).

#### 4.7.1.2 AFA Sideboards in the GOA

Many of the GOA sideboard fisheries would continue to be closed to directed fishing in regulation as a result of the Small Sideboard's action. The fisheries in the GOA for which NMFS would continue to calculate sideboard limits are shown in Table 4-12. All remaining GOA directed fishing would be closed to GOA non-exempt AFA CVs by regulation. The 16 GOA exempt AFA CVs would continue to be allowed to fish in any GOA fishery that was open to directed fishing by CVs not subject to sideboard limits, unless the Council determines that it is necessary to place sideboard limits on these vessels as part of this Pacific cod action. The AFA action determined that it was not necessary because these were heavily dependent on the GOA and had limited amount of BSAI pollock history.

**Table 4-12 AFA sideboard limits open for directed fishing along with their AFA CV GOA sideboard ratios, 2017 TACs, 2017 sideboard limits, and 2011-2017 average sideboard limits**

Target Species	Apportionments by season/gear	Area/component	Sideboard ratio <sup>1</sup>	2017 TACs (mt)	2017 sideboard limit (mt)	Average sideboard limit 2011-2017 (mt)
Pollock	A Season Jan 20 - Mar 10	Shumagin (610)	0.6047	2,232	1,350	2,537
		Chirikof (620)	0.1167	34,549	4,032	2,946
		Kodiak (630)	0.2028	11,014	2,234	1,730
	B Season Mar 10 - May 31	Shumagin (610)	0.6047	2,232	1,350	2,537
		Chirikof (620)	0.1167	39,420	4,600	3,505
		Kodiak (630)	0.2028	6,143	1,246	759
	C Season Aug 25 - Oct 1	Shumagin (610)	0.6047	19,569	11,834	8,398
		Chirikof (620)	0.1167	12,341	1,440	1,256
		Kodiak (630)	0.2028	15,886	3,222	2,701
	D Season Oct 1 - Nov 1	Shumagin (610)	0.6047	19,569	11,834	7,492
Chirikof (620)		0.1167	12,341	1,440	1,678	
Kodiak (630)		0.2028	15,886	3,222	2,565	
Annual	WYK (640)	0.3495	7,492	2,618	1,760	
	SEO (650)	0.3495	9,920	3,467	3,333	
Pacific cod	A Season Jan 1 - Jun 10	W	0.1331	15,242	2,029	1,926
		C	0.0692	19,881	1,376	1,637
	B Season Sept 1 - Dec 31	W	0.1331	10,161	1,352	1,283
		C	0.0692	13,254	917	1,091
Shallow-water flatfish	Annual	W	0.0156	13,250	207	187
		C	0.0587	19,306	1,133	1,046
Deep-water flatfish	Annual	C	0.0647	3,454	223	202
		E	0.0128	5,582	71	68
Rexsole	Annual	C	0.0384	4,930	171	222
Arrowtooth flounder	Annual	C	0.028	75,000	2,100	1,920
Flathead sole	Annual	C	0.0213	15,400	328	296
Pacific ocean perch	Annual	C	0.0748	16,671	1,247	1,015
		E	0.0466	4,568	213	167
Northern Rockfish	Annual	C	0.0277	3,354	93	93

Source: NMFS

<sup>1</sup>Determined using a ratio of 1995 to 1997 AFA CV catch to 1995 to 1997 TAC

#### 4.7.2 Non-AFA CV Sideboards

LLP licenses assigned to non-AFA vessels that have reported BSAI Pacific cod landings when operating as a CV are varied in their attributes. Some of the LLP licenses are owned by Amendment 80 firms while others are owned by persons not affiliated with any BSAI LAPP. A summary of those LLP licenses used by non-AFA vessels are presented in Table 4-13. The LLP holder name, LLP number, and ownership information are not reported. There is a total of 18 of those LLP licenses, only 15 have been used to harvest BSAI Pacific cod as a trawl CV since 2008. LLP licenses 8, 12, and 16 in Table 4-13 are the LLP licenses not used during that more recent period. One firm owns or controls 6 of the 18 LLP licenses.

To summarize, these LLP licenses may be used on vessels that range from under 60 ft LOA to almost 300 ft LOA. Six of the 18 LLP licenses do not have an endorsement to fish in either the Central GOA or Western GOA. None of the LLP licenses have an endorsement for the Eastern GOA. Because the GOA appears to be the most likely area to need sideboard protections, if the Council determines they are necessary at all, the 12 LLP licenses endorsed to fish in either the Central GOA or Western GOA are examined more closely.

- One LLP license is only endorsed to fish in the Western GOA (trawl only).
- Three LLP licenses are endorsed to only fish in the Central GOA (trawl only).
  - Two are C/P designated LLP licenses owned by the same company.
    - One is subject to Rockfish Program sideboards (apply during July, when rockfish were traditionally fished in the Central GOA, to certain rockfish species in the West Yakutat District and Western GOA).

- The other has BSAI yellowfin sole endorsement to deliver to a MS.
  - The third is a CV endorsed LLP license that has >60 AI transferable endorsement.
- Eight LLP licenses are endorsed for both GOA areas
  - Three have CV Rockfish Program sideboard limitations (CV Rockfish Program sideboard limits apply during July to dusky rockfish and Pacific ocean perch in the West Yakutat District).
  - One has a Crab Program GOA sideboard limit, except for pollock and Pacific cod
  - Two have not been used in the BSAI Pacific cod fishery since 2008.
  - One is a C/P that is subject to Rockfish Program sideboard limits
  - One is <60' LOA and has a Western GOA Pacific cod pot endorsement and a linked crab LLP license.

**Table 4-13 LLP licenses used on non-AFA vessels to make BSAI Pacific cod trawl CV landings from 2003 through 2018**

GF LLP	Crab LLP	LLP		MLOA	AI	BS	CG	WG	PCOD	YSOL		RP Sideboard			RP Quota		AI	
		Address	Type							BSAI	Crab Sideboards	CV	CP	CV	CP	A80	<60	>60
1		1	CV	<110	N	T	N	T	N	Y	N	N	N	N	N	N	N	Y
2	2C	2	CV	<110	N		Non-T; T	Non-T; T	Non-T; T	N	GOA-except plck & cod	N	N	N	N	N	N	N
3		1	C/P	<150	T	T	N	N	N	Y	N	N	N	N	N	N	N	N
4		1	C/P	<200	T	T	T	N	N	Y	N	N	N	N	N	N	N	N
5		1	C/P	>200	T	T	T	T	N	Y	N	N	Y	N	N	N	N	N
6		1	CV	<100	N	T	N	N	N	N	N	N	N	N	N	N	N	Y
7		3	CV	<110	N	T	T	T	N	N	N	Y	N	Y	N	N	N	N
8		4	CV	<60	N		Non-T; T	Non-T; T	Non-T; T	WG CV Pot	N	N	N	N	N	N	N	Y
9		5	C/P	<200	Non-T; T		Non-T; T	N	N	Y	N	N	N	N	N	N	N	N
10		1	C/P	<200	Non-T; T	N	N	N	N	N	N	N	N	N	N	N	N	N
11	11C	6	CV	<60	N		Non-T; T	Non-T; T	Non-T; T	WG CV Pot	N	N	N	N	N	N	N	N
12		7	CV	<100	Non-T; T	N	Non-T	Non-T; T	CV HAL (CG & AI)	N	N	N	N	N	N	N	N	N
13		8	CV	<125	N	T	T	T	N	N	N	Y	N	Y	N	N	N	Y
14		9	CV	<110	N	T	T	N	N	N	N	N	N	N	N	N	N	Y
15	15C	10	CV	<125	N	T	N	N	N	Y	GOA Sideboarded	N	N	N	N	N	N	N
16		11	C/P	<125	N	T	N	N	N	N	N	N	N	N	N	Y	N	N
17		12	CV	<110	N	T	T	T	N	N	N	Y	N	Y	N	N	N	N
18		1	C/P	>200	N	T	T	N	N	N	N	N	Y	N	Y	Y	Y	N

T = Trawl; Non-T = non-trawl

If the Council determines that sideboard limits are appropriate for the non-AFA trawl CVs in GOA fisheries, additional data will need to be collected on these LLP licenses in terms of their relative dependence on the BSAI versus GOA. In the BSAI they accounted for about 11 percent of the targeted Pacific cod catch by CVs.

The Crab Rationalization Program sideboard limits that are open to directed fishing in the GOA after the Small Sideboards action was implemented are listed in Table 4-14. Neither of the two non-AFA vessels subject to Crab Program sideboard limits have a Western GOA or Central GOA pot endorsement for Pacific cod and would be prohibited from participating in those fisheries.

**Table 4-14 Crab Rationalization Program sideboards (non-AFA vessels) that open to directed fishing**

Target species and gear	Area/Season	Area/component/gear	Sideboard ratio <sup>1</sup>	2017 TACs (mt)	2017 sideboard limit (mt)	Average sideboard limit (2011-2017) (mt)
Pacific cod <sup>2</sup>	A Season - Jan 1 -Jun 10	WG Pot CV	0.0997	15,242	1520	1,456
		WG Pot C/P	0.0078	15,242	119	114
		CG Pot CV	0.0474	19,881	942	1,117
		CGPot C/P	0.0136	19,881	270	320
	B Season - Sep 1 - Dec 31	WG Pot CV	0.0997	10,161	1013	970
		WG Pot C/P	0.0078	10,161	79	76
		CG Pot CV	0.0474	13,254	628	745
		CGPot C/P	0.0136	13,254	180	214

Source: NMFS

<sup>1</sup>Ratio of 1996-2000 non-AFA crab vessel catch to 1996-2000 total harvest.<sup>2</sup>Prior to 2012, Pacific cod was apportioned only by as inshore and offshore, so sideboard limits were not included in this table for 2011.

#### 4.7.3 BSAI Yellowfin Sole

AFA also includes CV sideboards for participation in the BSAI yellowfin sole (trawl limited access) fishery.<sup>14</sup> An AFA CV sideboard ratio of 0.0647 is set for years in which the initial total allowable catch (ITAC) falls below a 125,000 mt threshold (Table 4-11). This prevents the AFA CV sector from exceeding a harvest level based on historical catch by this sector in years when the yellowfin sole TAC is relatively low. Since the Amendment 80 sector is secure in its allocation of yellowfin sole, this relaxation of the sideboard in years where the TAC is relatively high, is meant to facilitate a directed fishing opportunity for these AFA vessels, which is not in competition with the Amendment 80 allocation. The AFA CV sideboards apply to CVs delivering to motherships as well as any AFA CVs that were to deliver shoreside.

However, the BSAI yellowfin sole fishery has essentially operated as an offshore fishery; including C/Ps and CVs that deliver to motherships. CVs that participate in the fishery and deliver to motherships must have an endorsement on their LLP license to operate. BSAI Amendment 116 limited the number of LLP licenses with a yellowfin sole mothership endorsement to eight. Two of those LLP licenses are associated with AFA CVs and are subject to the AFA BSAI yellowfin sole sideboard limit regulations. The other six are not associated with AFA vessels.

Under the proposed Pacific cod trawl CV LAPP, the Council may choose to keep the AFA CV yellowfin sole sideboard limits in place as the reason for these sideboards have not changed. Again, this sideboard is only applied in years when the BSAI yellowfin sole TAC is less than 125,000 mt. Since 2008, the yellowfin sole ITAC has been higher than 125,000 mt, so yellowfin sole sideboard limits have not been applied for AFA vessels.

The Council may also consider if implementation of a Pacific cod trawl CV LAPP would necessitate yellowfin sole sideboards for the non-AFA sector. For instance, if the six non-AFA vessels that have a yellowfin sole mothership endorsement received Pacific cod harvesting privileges and leased them to their cooperative, perhaps they could use that opportunity to expand their effort in the yellowfin sole fishery. While the BSAI yellowfin sole fishery has essentially been an offshore fishery, if a shoreside or stationary floating processor market ever developed for yellowfin sole, it may open this fishery to additional non-AFA trawl CV vessels that may or may not have benefited from a Pacific cod trawl CV LAPP. CVs may deliver BSAI yellowfin sole to shorebased or stationary floating processors without being subject to the LLP yellowfin sole mothership endorsement requirement. Any CV with a trawl endorsed BS and/or AI LLP license may delivery yellowfin sole to a shorebased or stationary floating processor. If the Council is not concerned about future growth in shoreside or stationary floating

<sup>14</sup> AFA also includes sideboards for AFA CP operating in the BSAI yellowfin sole fishery; however, these sideboards are less relevant to this discussion.

processor deliveries, and/or growth in non-AFA sector delivering to motherships since LLP mothership endorsements are necessary, then the Council may choose not to include yellowfin sole sideboard limits for the non-AFA trawl CVs at this time. Using a pattern similar to AFA sideboards, if the Council chooses to set sideboard limits for non-AFA CVs under the proposed action, it might choose to only apply the sideboard limit when the ITAC is less than 125,000 mt.

#### **4.8 Impacts to Captains and Crew**

##### **Topics of Council consideration:**

- **Will the program include any regulatory provisions to mitigate negative impacts on captains and crew?**
- **Will the program include economic data collection on captains and crew?**

This section considers potential impacts on captain and crew from the development of LAPPs in a general sense, highlights examples of tools that have been used to mitigate negative impacts in other LAPPs, and includes some preliminary discussion on captain and crew considerations for a BSAI Pacific cod trawl CV fishery LAPP. As the Council hones a set of alternatives and options, future analysis should more directly consider expected impacts for captains and crew of historical vessels within the nuances of the BSAI Pacific cod trawl CV fishery.

##### **4.8.1 Captains and Crew Effects Due to LAPP Implementation**

The shift in management to a rationalized fishery can impact participating captains and crew in several ways. For captain and crew that remain in the fishery, the nature of the position can change, sometimes in positive ways. For instance, implementation of other Council-designed LAPPs, such as the halibut and sablefish IFQ Program and the BSAI Crab Rationalization Program, have resulted in longer fishing seasons that operate at a slower pace, with higher catches per vessel. This can produce benefits for captains and crew such as increased safety and more career stability including certainty in access and schedule, allowing crew to plan better.

Introduction of LAPP management can also change the basis of crew compensation. For crew that remain in the fishery this shift can be financially beneficial - depending on which metrics are examined. Analysis of the BSAI Crab Rationalization Program demonstrated substantially greater average/ median earnings for crew since implementation, but overall a lower percent of gross exvessel revenue has been directed toward crew compensation given the introduction of new administrative costs and quota leasing costs (NPFMC, 2012a).

The assignment of harvesting privileges through an IFQ- or cooperative- based LAPP can also motivate consolidation of harvesting privileges, particularly if a goal of the program is to address an overcapitalized fleet. While LAPP management can provide efficiency gains for the fleet overall, this shift in management can also create negative spillover impacts for captains and crew that were not assigned harvesting privileges and must now seek opportunity elsewhere. Moreover, limited access programs that assign harvesting privileges often increase the barriers to entry in a fishery and change the routes to upward mobility within the fishery.

##### **4.8.2 Examples of Captain and Crew Provisions in Other Programs**

MSA states that the Council may also include measures to assist entry-level and small vessel owner-operators, captains, crew, and fishing communities through set-asides of harvesting allocations, including providing privileges, which may include set-asides or allocations of harvesting privileges, or economic assistance in the purchase of limited access privileges. As stated, the measures to assist captains and crew are not prescribed in MSA and thus, LAPPs previously developed by the Council have used a variety of



approaches and placed varying degrees of emphasis on mitigating captain and crew impacts. The level of regulatory involvement and types of measures considered depends primarily on the nature of the fishery pre-rationalization (for instance, is it more owner-operated operations or comprised of more large-scale businesses) and the Council and stakeholders' vision for the fishery moving forward.

As previously compared in Table 3-2 and expanded on below, the Council has relied on several types of regulatory mechanisms in past programs designed to address impacts on captains and crew. In addition to the cooperative programs highlighted in Section 3, the following section includes provisions used in the Halibut and Sablefish IFQ fishery as an example of a program with a greater variety of measures designed to mitigate negative captain and crew impacts. Not all the following mechanisms may be appropriate for a BSAI Pacific cod trawl CV fishery LAPP. The following are intended to highlight the breadth of regulatory measures that have been used in the past to mitigate negative impacts on captains and crew.

- **Active participation requirements** – To ensure program benefits accrue to active participants, such as captains and crew rather than absentee owners, the Halibut and Sablefish IFQ fishery and Crab Rationalization Program both include requirements to demonstrate past and/ or current participation on board a vessel. Requirements vary; as one of the original objectives of the Halibut and Sablefish IFQ Program was to assure that these two fisheries are dominated by owner/operator operations (NFPMC/ NMFS, 2016), the requirements are relatively more restrictive in this program. The Halibut and Sablefish IFQ fishery requires CV quota holders to be onboard the vessel (with exceptions for initial issues and some leasing arrangements). For both programs, obtaining quota by transfer requires a demonstration of at least 150 days of past crew experience.
- **Crew shares** – While the majority of harvesting quota in the Crab Rationalization Program was issued to LLP license holders based on the licenses' history, the Crab Rationalization Program also issued 3 percent of the initial allocation of harvesting quota to eligible captains in order to protect captains' historical interests in the program fisheries. These "C shares" have more restrictive requirements on demonstrating active participation and can be revoked if those requirements are not met.
- **Vessel use caps** - Limits on how many pounds of quota a vessel can harvest in a year have been established for the Halibut and Sablefish IFQ fishery, Amendment 80, and the CGOA Rockfish Program (differentiated between CV limits and C/Ps limits). These restrictions limit the amount of total vessel consolidation that can occur. Without alternative opportunities, consolidation can lead to a decrease in the availability of captain and crew job, thus this type of provisions may prevent the displacement of some captain and crew in these fisheries.
- **Cooperative use caps** – Limits on the amount of quota that a cooperative may hold, or harvest have also been in places for CV cooperatives in the CGOA Rockfish Program. These restrictions ensure there are multiple cooperative that form (at least 4) and also limits consolidation.
- **Lending authority for loans through NMFS Fisheries Finance Program** – The Halibut and Sablefish IFQ fishery and Crab Rationalization Programs include low interest loan opportunity through a Federal Program. This program is designed assist eligible captains and crew in purchasing quota or cover the cost of construction or reconstruction of fishing vessels.
- **Tracking information on captains and crew** – The CR and Amendment 80 programs include economic data collections (Economic Data Reports; EDRs) to assess the economic impacts of a program on captains and crew. For instance, in the Crab Rationalization Program the Council continues to be focused on high lease rates of annual harvesting privileges, the amount of the lease rate that is charged against crew compensation, and the percent of gross revenue that is attributed to crew compensation. The Council tracks information on lease rates and crew

compensation in the industry's annual EDRs, which has been presented in the Crab Economic SAFE report as well as receiving information on lease rates directly from cooperative representatives during the annual cooperative report. These data have also been used to show program impacts through Crab Rationalization Program and Amendment 80 program reviews.

Non-regulatory methods (cooperative-led action) can also promote captain and crew benefits. For instance, the industry involved in the Crab Rationalization Program has created a right of first offer program to help facilitate the transfer of owner quota (non-C share quota) to active participants through their cooperative contracts. In the Halibut and Sablefish IFQ fishery, some crew members have unionized to advocate for crew interests.

#### **4.8.3 Captain and Crew Considerations for the BSAI Pacific Cod Trawl CV Sector**

The expectation of any negative impacts on captains and crew generally depends on the amount of consolidation that occurs and the alternative opportunities available to these two stakeholder groups. Thus, for the BSAI Pacific cod trawl CV fishery, future analysis can more thoroughly examine the likelihood of consolidation due to the proposed action as well as the diversification and opportunities for these vessels outside of the Pacific cod trawl CV fishery. For instance, if an AFA vessel is allocated Pacific cod trawl CV catch history in addition to their ability to access BSAI pollock, it may be that their catch history of Pacific cod is caught by a different vessel, but this frees that captain and crew to focus on pollock. In this scenario, although consolidation may happen the captain and crew may not be disadvantaged in the shift in Pacific cod management. Moreover, although the purpose and need statement (Section 1.1) mentioned an increase in the number of LLP licenses active in the Pacific cod fishery it is not clear the level of concern associated with current overcapitalization versus the risk of additional participation.

Any assessment of captain and crew impacts in the BSAI Pacific cod trawl CV sector will be stunted by the lack of data on crew residency, employment, and earnings. This precludes any rigorous evaluation of the changes in crew employment and earning and additional dimension of community impacts due to the implementation of a proposed program without a retrospective data collection of the conditions prior to implementation. Economic data for captains and crew have been collected for the GOA Economic Data Reports (EDRs), which included some vessels/ captains/ crew that also participated in the BSAI. These data have been referenced in past social impact analyses for the BSAI (e.g. NPFMC, 2019a); however, this analysis noted the lack of complete information was a substantive obstacle to a comprehensive analysis of the human dimensions of the fishery and the community footprint of potential social impacts associated with the proposed management actions. The Council may consider whether a BSAI Pacific cod trawl CV LAPP would include requiring economic data reporting, and if so, whether this would include captain and crew data. One limitation with implementing a reporting requirement after a program is implemented is that it will not be possible to compare changes in the captain and crew data before and after implementation of the program.

Generally, the BSAI Pacific cod trawl CV fishery is not considered an entry-level sector; however, the proposed action is likely to exacerbate the cost of entry. Under the status quo, participating in this fishery requires a trawl vessel capable of operating in the BSAI and an LLP license with the endorsements for these sub areas and trawl fishing, most of which are AFA derived (see Table 1-1). Layering harvesting privileges onto an already valuable LLP license, will further drive up the cost of access. Moreover, many of the LLP license provide opportunities to participate in other groundfish fisheries and may inflate the cost to participate in these fisheries as well.

#### 4.9 Bycatch/PSC Management

##### Topics of Council consideration:

- **What amount of halibut and crab PSC should be apportioned to a trawl CV sector LAPP?**
- **Will halibut and crab PSC be further apportioned to cooperatives under the proposed LAPP?**
  - **If so, how should PSC be apportioned by cooperative?**

50 CFR 679.21(b)(2) and (e)(5) authorizes NMFS, after consulting with the Council, to establish seasonal apportionments of halibut and crab PSC amounts for the BSAI trawl limited access fisheries in order to maximize the ability of the fleet to harvest the available groundfish TAC and to minimize bycatch. The factors to be considered are (1) seasonal distribution of prohibited species, (2) seasonal distribution of target groundfish species relative to prohibited species distribution, (3) PSC bycatch needs on a seasonal basis relevant to prohibited species biomass and expected catches of target groundfish species, (4) expected variations in bycatch rates throughout the year, (5) expected changes in directed groundfish fishing seasons, (6) expected start of fishing effort, and (7) economic effects of establishing seasonal prohibited species apportionments on segments of the target groundfish industry. Based on these criteria, the Council recommends and NMFS approves the seasonal PSC apportionments to maximize harvest among fisheries and seasons while minimizing bycatch of PSC.

The Council's February 2019 motion requested this paper include implications for bycatch management including halibut savings to benefit the health of the halibut resource. In general, there is the potential that development of BSAI Pacific cod LAPPs will reduce their halibut PSC. Participants with exclusive shares could have time to be more selective in targeting their allocation and thereby potentially reduce their halibut PSC. This reduction in halibut PSC usage and bycatch rates from LAPPs is apparent in the Amendment 80 Program and the Central GOA Rockfish Program. In the Amendment 80 program review (NPFMC, 2014), halibut PSC and bycatch rate in the Amendment 80 fisheries has declined since implementation of Amendment 80 program in 2008. In the Central GOA Rockfish Program Review (NPFMC, 2017), halibut PSC and bycatch rates have also declined under the Pilot Program and the Rockfish Program. Halibut rates before the Pilot Program ranged from 1.5 to 3.0 kg of halibut per metric ton of total groundfish basis species. After the Pilot Program was implemented the rates decreased to about 0.25 kg of halibut per metric ton of total groundfish basis species each year. This indicates that the structure of the LAPP allowed harvesters to implement fishing strategies to reduce halibut PSC rates. In addition to the inherent reductions in PSC that may be attainable through cooperative management, the Council can always consider building in alternatives that specifically target PSC reductions.

##### 4.9.1 Halibut PSC

The annual halibut PSC limit for the BSAI is set at 3,515 mt. That limit is allocated to the following BSAI fishing sectors based on regulations at 50 CFR 679.21(b)(1).

- 315 mt (9.0 percent) as the PSQ reserve for use by the groundfish CDQ program,
- 1,745 mt (49.6 percent) for the Amendment 80 sector,
- 745 mt (21.2 percent) for the BSAI trawl limited access sector, and
- 710 mt (20.2 percent) for the BSAI non-trawl sector.

Halibut PSC assigned to the trawl limited access sector is further divided by fishery, with 391 mt (52.5 percent) of the sector allocation designated for use in the BSAI Pacific cod fishery (see Table 4-15). This limit is shared by the BSAI Pacific cod trawl CV sector and the BSAI Pacific cod AFA trawl C/P sector.

**Table 4-15 Final 2019 halibut PSC allowance (mt) for the BSAI trawl limited access sector**

BSAI trawl limited access fisheries	Halibut (mt)
Yellowfin sole	150
Rockfish (April 15-Dec 31)	4
Pacific cod	391
Pollock/Atka mackerel/other species	200

Source: Annual specifications (2019)

At present, the halibut discard mortality rate (DMR) assigned to pelagic trawl gear is 100 percent of the halibut caught. CVs using non-pelagic trawl gear are assigned a DMR of 59 percent. The DMR estimation methodology underwent revisions in 2016 and the new methodology was first used to modify DMRs in 2017 on a two-year cycle (81 FR 87863, December 6, 2016). The DMR for CVs using non-pelagic trawl gear decreased to 59 percent from 60 percent in 2019 using the revised methodology to calculate halibut mortality. Revising the DMR setting methodology is intended to improve estimation accuracy, transparency, and transferability in the methodology used for calculating DMRs.

Beginning in January 2020, new regulations will allow halibut bycatch to be sorted on the deck of trawl C/Ps and motherships when operating in the non-pollock groundfish fisheries off Alaska. Vessels choosing to participate in this voluntary program will be required to meet new catch handling and monitoring requirements in order to ensure the accurate accounting of halibut sorted on deck and returned to sea. Haul specific DMRs will be estimated for each vessel that chooses to deck sort halibut using methods detailed in the halibut deck sorting proposed rule (50 CFR 679, April 16<sup>th</sup>, 2019).

The Council is also currently considering a halibut abundance based management (ABM) strategy to formulate annual halibut PSC limits in the BSAI that would fluctuate based on estimated halibut abundance. Under an ABM approach, halibut PSC would be set annually based on the results of one or more survey's conducted by NMFS and/or the International Pacific Halibut Commission ([BSAI Halibut Abundance-based Management of PSC Limits – North Pacific Fishery Management Council](#)). Depending on the direction the Council pursues on this action, the change in methodology could impact the way halibut PSC limits are calculated or applied under a BSAI Pacific cod trawl CV LAPP. The Council is scheduled to receive their initial review of the halibut ABM action at its October 2019 meeting.

#### 4.9.2 Crab PSC

Red king crab (Zone 1), *C. opilio* (COBLZ), and *C. bairdi* (Zone 1 and Zone 2) PSC limits are established for the trawl limited access sector (see Table 4-16). Like for halibut, crab PSC limits are further divided by groundfish directed fishery. The yellowfin sole fishery is apportioned most of the crab PSC limit, followed by Pacific cod.

**Table 4-16 Final 2019 crab PSC allowances (animals) for the BSAI trawl limited access sector**

BSAI trawl limited access fisheries	Red king crab (Zone 1)	<i>C. opilio</i> (COBLZ)	<i>C. bairdi</i> (Zone 1)	<i>C. bairdi</i> (Zone 2)
Yellowfin sole	23,338	3,224,126	346,228	1,185,500
Rockfish (April 15-Dec 31)		5,326		1,000
Pacific cod	2,954	137,426	60,000	49,999
Pollock/Atka mackerel/other species	197	53,265	5,000	5,000

Source: Annual specification (2019)

#### 4.9.3 PSC Apportionment Issues

Should the Council move forward with the development of a LAPP for Pacific cod trawl CVs, it could consider apportioning the cooperatives their own portion of halibut and crab PSC limits based on member Pacific cod allocations. Apportioning PSC along with a target species is typical in other Council-developed LAPPs. Having sector-level PSC rates could continue the incentives to race-for-fish, because shared PSC could become a constraining factor on the cooperatives' ability to catch their Pacific cod harvest privileges. With each cooperative getting their own allocation of halibut and crab PSC allowance, the cooperatives no longer would be concerned with the PSC of other vessels outside the cooperatives closing their cooperative fishery prematurely. Moreover, it may create more direct personal incentive to keep PSC rates low, as this would allow cooperatives the ability to continuing harvesting Pacific cod. However, apportioning transferable PSC allocations to the cooperative level would require these vessels to be the full coverage category in the Observer Program (see further discussion in Section 4.10.2).

There are two primary issues that need to be addressed based on previous Council direction in developing a LAPP. The first is the amount of PSC species that would be apportioned to the trawl CV sector for use in the LAPP. The second is defining how the available PSC would be apportioned to cooperatives.

Looking at the first issue, the Council would need to define how much crab and halibut PSC would be available for the Pacific cod trawl CV sector. Two approaches are considered. The first PSC allocation approach would be to allocate a portion of the BSAI trawl limited access PSC based on the amount of Pacific cod allocated to the trawl CV and AFA C/P sectors. Because the trawl CV sector is allocated 22.1 percent of the available Pacific cod and the AFA C/Ps are allocated 2.3 percent of the available Pacific cod, the trawl CV sector is allocated 90.57 percent of the combined trawl CV and AFA C/P sector allocation for Pacific cod and the AFA C/Ps are allocated the remaining 9.43 percent.

Thus for halibut PSC, if the 391 mt of halibut PSC allowance assigned to the trawl limited access sector for Pacific cod targets were divided, it would result in the trawl CV sector being apportioned about 354 mt of halibut PSC and the AFA C/P sector being apportioned 37 mt. A primary drawback of this approach is that it assumes the trawl CV sector and AFA C/P sector harvest the same proportion of Pacific cod in the Pacific cod target fishery. However, 2003 through 2018 about 60 percent of the Pacific cod harvested by AFA C/Ps was taken in the pollock target fishery. Midwater pollock target catches accrue to the pollock/Atka mackerel/other species halibut PSC or crab PSC limits and reaching those limits does not close directed fishing using pelagic trawl gear. Because the AFA C/Ps use more of their Pacific cod allocation as incidental catch in other target fisheries, that sector would be relatively better off with regards to the halibut PSC apportionment since they would receive more halibut PSC than they have historically used since 2008 in their Pacific cod target fishery (see Table 4-17). Halibut PSC allocations under this approach may be sufficient for the trawl CV sector to harvest their allocation of BSAI Pacific cod. However, depending on the years selected for Pacific cod allocations, future BSAI Pacific cod TACs, unexpectedly high catch rates of halibut PSC, this apportionment could be more constraining to the target catch of BSAI Pacific cod in the trawl CV sector in some years.

Another approach the Council could utilize is to base the apportionment of crab and halibut PSC on the relative amount of Pacific cod used in the Pacific cod *target* fishery. Under this approach, the AFA C/P sector accounted for 3 percent of the combined trawl CV and AFA C/P target BSAI Pacific cod catch from 2003 through 2018. The trawl CV sector accounted for 97 percent. The AFA C/P sector Pacific cod usage is even lower if some of the early years during the 2003 through 2018 period are excluded since some of the early years accounted for as much as 8 percent in a year (see Table 4-17). A 3 percent apportionment means that the AFA trawl C/Ps would be allocated less than 12 mt of halibut to support their Pacific cod fishery. A summary of the halibut PSC usage in the Pacific cod target fisheries are reported in Table 4-17.

**Table 4-17 Reported halibut mortality (mt) in the non-CDQ BSAI Pacific cod target fishery by trawl limited access sector vessels**

Year	Reported Halibut mortality (mt)			Percent of Total	
	Trawl CV	AFA C/P	Total	Trawl CV	AFA C/P
2004	443	12	455	97%	3%
2005	596	54	650	92%	8%
2006	586	34	620	95%	5%
2007	427	25	452	94%	6%
2008	291	2	293	99%	1%
2009	181	2	183	99%	1%
2010	255	1	256	100%	0%
2011	238	2	240	99%	1%
2012	429	0	429	100%	0%
2013	309	1	310	100%	0%
2014	281	8	289	97%	3%
2015	236	4	240	98%	2%
2016	294	10	304	97%	3%
2017	221	17	238	93%	7%
2018	205	10	215	95%	5%

Source: AFA C/P - Pollock Conservation Cooperative Reports; Trawl CV - AKFIN, May 2019. Sector\_PSC (4-16-19)

In recent years the crab PSC in the Pacific cod BSAI trawl limited access sector has been well below the sector's limits. As a result, it does not appear that minor changes in the apportionment of the trawl limited access sector crab PSC limit among the trawl CV sector and the AFA trawl C/Ps will have as great an impact compared to halibut. The recent crab PSC for the two trawl sectors in the BSAI Pacific cod sector are reported in Table 4-18 and Table 4-19.

**Table 4-18 Reported crab PSC in the trawl CV non-CDQ BSAI Pacific cod target fishery**

Species	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Red King crab	467	2,963	22	25	1,249	475	437	2,109	316	2	587	60	585	361	200
C. bairdi	44,927	57,138	56,284	28,355	34,632	6,778	21,714	12,206	8,035	6,313	8,304	10,247	11,069	9,201	1,945
C. opilio PSC (COBLZ)	86	59	12	89	349	251	14	42	0	321	2,291	71	5	0	0
Other C. opilio	4,924	6,485	18,274	8,406	17,657	8,144	4,003	5,702	5,902	4,814	1,640	1,072	30	701	760

Source: AKFIN, May 2019. Sector\_PSC (4-16-19)

**Table 4-19 Reported crab PSC in the AFA trawl C/P non-CDQ BSAI Pacific cod target fishery**

Species	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Red King crab	385	75	7	21	60	0	25	51	0	0	0	0	13	0	0
C. bairdi	1,218	919	2,803	1,360	324	79	5	380	0	80	1,016	30	0	148	148
C. opilio PSC (COBLZ)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other C. opilio	89	116	996	681	0	0	0	0	0	0	207	0	15	0	0

Source: AKFIN, May 2019. Sector\_PSC (4-16-19)

The second issue that needs to be addressed is how to apportion the available PSC to the LLP license holders and ultimately the cooperatives that form. The most common approach for allocating PSC to cooperatives is to allocate the PSC in proportion to the target species allocated to a cooperative. In this case it would be BSAI Pacific cod. For example, if an LLP license was allocated 2 percent of the BSAI Pacific cod available under the LAPP, the license would also be apportioned 2 percent of the available halibut and crab PSC available under the LAPP. This approach has been used in other LAPP programs

because it does not reward or penalize harvesters for past PSC usage rates in the Pacific cod fishery. Each LLP license holder would be assigned the same percentage of each PSC species apportioned to the program at the same percentage as their BSAI Pacific cod apportionment. Previous Councils had considered allocating PSC based on the amount of PSC that was used to harvest the target catch or some inverse relation to that amount, but determined that allocating PSC at the same rate as the directed fishery species better met their objectives of a simple approach that did not reward fishing behavior that is contrary to its goals.

#### 4.9.4 Groundfish Bycatch

In developing a Pacific cod trawl CV LAPP, the Council may need to consider both groundfish bycatch in the Pacific cod fishery as well as Pacific cod bycatch in other groundfish fisheries. General tools to address groundfish bycatch related to a Pacific cod LAPP include sideboards discussed in Section 4.7, maximum retainable amounts (MRAs) of groundfish harvested incidentally to Pacific cod (or if needed, the MRAs of Pacific cod harvested incidentally to other groundfish fisheries), and if the Council allocates Pacific cod by target catch, by establishing an incidental catch amount (ICA) to account for the harvest of Pacific cod for other directed fisheries.

Based on the structure of the LAPP (e.g. if allocations are based on targeted Pacific cod catch) and the intrinsic Pacific cod bycatch rates in other BSAI trawl CV fisheries, NMFS would need to determine the appropriate ICA amount that would be deducted from the sector allocation before the cooperative allocations are distributed. The amount of the ICA will likely be determined on an annual basis and established as an amount of Pacific cod in metric tons, not as a percentage of the trawl CV sector allocation. Setting the ICA in metric tons annually provides inseason management the flexibility to adjust the ICA based on the changes in BSAI groundfish TACs and expected incidental catch rates in trawl CV fisheries.

With a BSAI Pacific cod trawl CV LAPP, an ICA may be necessary to account for Pacific cod caught outside the LAPP in the BSAI Pacific cod parallel fishery by trawl CVs that do not have an LLP or Federal Fisheries Permit (FFP) designated on the vessel. This has not been an issue because since 2010, 37 trawl CVs have participated in the BSAI Pacific cod parallel fishery from 2010 through 2019, all of which had an LLP with the appropriate endorsements during this period. The amount of targeted Pacific cod that was harvested from the parallel fishery that are not confidential ranged from 153 mt in 2011 to 1,009 mt in 2010. As a percent of total targeted BSAI Pacific cod harvested by all trawl CVs, the parallel fishery accounted for less than 0.5 percent in 2011 to 4.08 percent in 2010. If the Council moves forward with a trawl CV LAPP, catch by cooperative CVs participating in the BSAI Pacific cod parallel fishery would be accounted for via the cooperative's Pacific cod allocation. As for the harvest of BSAI Pacific cod from the parallel fishery by trawl CVs that do not have an LLP or FFP, likely the most appropriate accounting tool is an ICA, which will likely require some level of coordination with the State in order to fund the ICA appropriately.

This ICA could also account for the MRA amounts of Pacific cod caught in other target fisheries. Table 11 to 50 CFR 679 reports the MRA of Pacific cod as incidental catch in other BSAI directed fisheries (basis species). In all non-Pacific cod directed fisheries the MRA of Pacific cod is set at 20 percent of the basis species. If the Council were to consider modifying the MRA for Pacific cod in the future, the pollock, yellowfin sole, and Atka mackerel fisheries have the greatest amount of Pacific cod incidental catch. However, those fisheries also have relatively large TACs. The pollock TAC being about 7.25 times larger than the Pacific cod TAC. The yellowfin sole TAC in 2018 was about 82 percent of the Pacific cod TAC. The Atka mackerel TAC was about 38 percent of the BSAI Pacific cod TAC. If this issue is a concern it will require additional study after the Council develops alternatives and options.

The Council may also consider whether or not the MRA of other groundfish specific in the Pacific cod trawl CV fishery would be adjusted under a LAPP. There appears to be limited opportunities for qualified

trawl CVs utilizing the benefits of a cooperative program to strategically target incidental catch species. For most groundfish species, the additional flexibility to “top off” early in a fishing trip is not expected to affect most groundfish stocks. For some groundfish species though, the greater flexibility to “top off” for a species in combination with other factors like low OFL, ABC, and TAC relative to high total catch could increase the risk of exceeding the ABC and TAC. However, as noted in Table 11 to 50 CFR 679, the MRAs for these at-risk species in the BSAI are set extremely low to discourage “top off” fishing.

#### **4.10 Management and Enforcement**

##### **Topics of Council consideration:**

- **Will the Council require cooperative reporting requirements (what would those requirements be)?**
- **Will the Council require Economic Data Reporting (what information would be collected?)**

MSA requires that LAPPs include an effective system for enforcement, monitoring, and management of the program, including the use of observers or electronic monitoring systems. This section describes some of these expectations and provides a placeholder for additional investigation that may be necessary for these topics as a program develops further.

##### **4.10.1 Cost Recovery**

Section 304(d)(2) of the MSA authorizes and requires NOAA Fisheries to recover the actual costs directly related to the management, data collection, and enforcement of any LAPP and the Western Alaska CDQ Program up to three percent of ex-vessel gross revenues of species allocated under the program. Recovering costs is a four-step annual process: 1) calculate the incremental costs incurred to manage and enforce the fishery, 2) calculate the total value of the fishery, 3) divide the total costs in step one by the total fishery value in step two to determine the fee percentage, and 4) apply the fee percentage to each permit holder’s catch and invoice each permit holder. If the Council continues to develop a LAPP for the BSAI Pacific cod trawl CV sector it will also be necessary to consider the implementation of cost recovery.

##### **4.10.2 Observer Coverage**

Under current monitoring requirements, Pacific cod CVs in the BSAI are in the partial coverage category. Each year, the Annual Deployment Plan (ADP) describes the science-driven method for deployment of observers on vessels in the partial coverage category (50 CFR 679.51(a)) in the Pacific halibut and groundfish fisheries off Alaska. Since 2013, observer coverage rates in the partial coverage category have ranged from approximately 14.8 to 28 percent for trawl CVs and 4 to 16 percent for pot CVs (Table 1-1, NMFS, 2019).

After the implementation of the restructured Observer Program in 2013, NMFS allowed the owners of BSAI trawl CVs in the partial observer coverage category to volunteer on an annual basis for full observer coverage during all times that they participate in BSAI trawl fisheries. Individuals who made this choice were typically owners of AFA catcher vessels that participate in the BSAI limited access Pacific cod trawl fishery to better manage Pacific halibut PSC limits within their cooperatives. In 2016, NMFS published a regulatory amendment to implement this annual request in regulation (81 FR 67113, 30 September 2016).

Under the current Observer Program, CVs participating in LAPPs with transferable PSC allocations are in the full coverage category. Therefore, the proposed BSAI Pacific cod trawl CV LAPP would likely change Observer Program monitoring requirements for this fishery. Depending on the specific elements of a LAPP, a variety of monitoring tools are available including observer coverage and EM for catch



estimation and compliance monitoring. Monitoring requirements would be designed to balance data collection needs with impacts to vessel operations. If the Council continues to develop Pacific cod LAPPs in the BSAI, it will be important to also consider the implications for observer coverage.

#### **4.10.3 Cooperative Reporting Requirements**

The Council could include a cooperative reporting requirement where each cooperative could be required to provide an annual report to the Council on the cooperative's activity the previous year. Current cooperative reports include AFA, Amendment 80, Crab Rationalization, and the Central GOA Rockfish Program during the April Council meeting. In requiring these reports, the Council could track the effectiveness of the cooperatives in meeting the Council's intended goals of the cooperative program. Additionally, they are a tool for the cooperatives to provide feedback on the program to the Council. The types of information that could be required are:

- allocations and sub-allocations of Pacific cod,
- sideboard limits and usage,
- retained and discarded catch of Pacific cod,
- cooperative monitoring methods,
- penalties imposed by the cooperative on members, and
- PSC bycatch numbers or amounts.

If the Council includes a cooperative reporting requirement for the trawl CV or pot CV management programs, the Council should provide a clear explanation of the objective of the cooperative reporting requirement to address Paperwork Reduction Act requirements which requires Federal agencies (1) to seek public comment on proposed collections and (2) to submit proposed collections for review and approval by the Office of Management and Budget (OMB). OMB reviews agency information collection requires for approval and disapproval.

#### **4.10.4 Enforcement**

Although specifics of the proposed management options are not yet available to determine enforcement issues, the primary enforcement goal is to ensure timely and accurate reporting of catch. This is dependent on quota monitoring, which is best enforced dockside or through fishery data review. Additionally, FMP measures that create dependence on observer data for vessel-level management can contribute to added tensions between onboard observers and vessel operators and managers. As a result, observers may be placed under considerable pressure by vessel crew because of their roles collecting data and reporting violations.

The Enforcement Committee has provided law enforcement precepts intended as general guidance for the Council to consider when developing regulatory programs. Depending on the specific design of the regulatory program, the enforcement tools and strategies used could require a combination of enforcement methods. The enforcement precepts section pertaining to Catch Shares and LAPP's is applicable to the BSAI cod trawl CV LAPP, as well as enforcement precepts sections pertaining to Record Keeping and Reporting, Observers/Electronic Monitoring, Bycatch, PSC, and MRA management measures that will be utilized in the LAPP. Provided in Table 4-20 are the enforcement precept's considerations for just the catch shares/individual fishing quotas/limited access program section.

**Table 4-20 Enforcement Precepts for the catch shares/individual fishing quota/limited access program**

Advantages from an enforcement perspective	Disadvantages from an enforcement perspective
<p>Industry performs primary management effort while the agency validates and enforces limits.</p> <p>Monitoring of fish landings is effective for verifying reporting by vessels.</p> <p>Observers record catch data, and quotas can be managed on a daily/vessel basis.</p>	<p>Significant comparative analysis is required to cross-check landings against VMS, observer, and electronic monitoring data.</p> <p>Failures of electronic systems (scales or video monitoring systems) require a vessel to cease fishing until repairs can be made.</p> <p>Heavy reliance on observer data to enforce allocated limits of target and prohibited species catch (PSC) may result in scale tampering and observer sample bias, interference, coercion, and harassment.</p> <p>Accompanying regulations, such as sideboards and ownership limitations, can be complex and difficult to enforce.</p> <p>May spread out fishing effort across time and space. Instead of specific fishing seasons to monitor, a fishery may last nearly year-round, over vast areas, and possibly require more enforcement assets for the extended season.</p> <p>Accompanying regulations such as ownership limitations are difficult and resource intensive to enforce.</p> <p>For some high value species, potential for illegal/unaccounted for landings at remote locations is increased.</p>

Source: Enforcement Considerations for NOAA Fisheries and North Pacific Fishery Management Council, December 2015

#### **Enforcement Recommendations for LAPP Development:**

- Consider the addition of dockside monitors with authority to conduct hold checks.
- Clearly identify prohibitions against fishing activity when monitoring measures fail.
- Regulations must be strong to protect observers and observer work environments, sample areas, and data.
- Effectiveness of enforcement depends on observers, technologies deployed, and monitoring of landings.
- Consider electronic monitoring technologies (VMS features, sensor, and video) at sea to detect and deter area fished quota violations. VMS is the established, vetted method for documenting vessel location for enforcement purposes.
- If at-sea quota debiting is desired, the use of certified scales, electronic reporting, observers, and video monitoring are necessary to ensure accuracy.
- Consider electronic reporting to provide near real time debiting of quota accounts. Timely quota monitoring benefits enforcement, fishermen, and fisheries managers.

#### **4.10.5 Economic Data Reports**

The Council has included EDR requirements as part of its more recent established or proposed catch share programs. EDRs are designed to gather various levels of ownership, revenue, cost, vessel operations, and employment information from vessel owners, vessel operators, processors, permit holders, and/ or leaseholders who participate in several of the catch share programs in the North Pacific fisheries. In general, the purpose of the EDR requirements is to gather information to improve the Council's ability to

analyze the economic effects of catch share or rationalization programs, to understand the economic performance of participants in these programs, and to help estimate impacts of future issues, problems, or proposed revisions to the programs covered by the EDRs.

Currently, the Council has four EDRs in place:

- 1) BSAI Crab EDR, implemented in 2005 (Crab EDR);
- 2) Trawl Catcher/Processor (CP) EDR implemented in 2007 for Amendment 80, and in 2015 for CPs operating in the GOA groundfish fisheries (A80 EDR);
- 3) BS Chinook salmon bycatch management program EDR for participants in the BS pollock fishery, implemented in 2012 (A91 EDR); and
- 4) GOA trawl EDRs for trawl catcher vessels operating in the GOA.<sup>15</sup>

While EDRs are not explicit requirements of MSA, a variety of Federal laws and Executive Orders require the preparation of a written analysis of the economic impacts of proposed fishery conservation and management actions developed by the Council (see NPFMC,2019c for greater specificity on the economic analysis requirements). These data can provide meaningful quantitative economic and sometimes social considerations relevant to fisheries management. The laws, E.O.s, and agency guidelines strongly support the collection of high-quality economic data and the most robust quantitative analysis possible given the data and analytical methods available and the scope and complexity of the particular issue. The Council and its advisory bodies have also supported and requested the use of this type of information in the past. For instance, EDR data has informed program reviews, discussion papers and NEPA analyses for fishery management amendments, and is central in annual EDR reporting documents (e.g. Economic SAFE reports).

Moreover, implementation of a data collection prior to implementation of a LAPP can provide relevant baseline information to assess the impacts of the catch share program on affected harvesters, processors, and communities. An adequate assessment of changes in the economic characteristics of a fisheries can be extremely difficult if baseline information prior to implementation is not available. As exemplified for the Crab EDR, these data may be difficult to retroactively collect.

As described in Section 4.10.3, Federal data collections necessitates meeting specific PRA requirements, consideration of stakeholder burden, and time for OMB approval. In order to generate a continuous data collection that will provide the greatest future utility, while balancing reporting burden, care must be put into establishing the most appropriate questionnaire form from the beginning. Thus, if the Council continues to move forward with the current LAPP proposal, it should not delay in considering whether it will include EDR requirements, and if so what type of information would be important to collect.

## **5 LAPP for BSAI Pot CV $\geq$ 60 ft Sector**

Much of the general information regarding catch share programs described earlier for the trawl CV sector could also apply to the pot CV  $\geq$  60 ft sector. That information is not repeated in this section. Instead this

---

<sup>15</sup> Based on Council direction, work is currently being done on two EDR-related actions. The first is an amendment package to make specific changes to the EDR Programs such as 1) removing requirements for 3<sup>rd</sup> party audits, 2) revise data aggregation requirements, and 3) consider revising or removing the GOA EDR requirements due to lack of LAPP implementation. The second action is a more holistic consideration of the EDR framework including the Council's previous intent for EDRs, any duplicity in collection, the need for and challenges of the inconsistencies between program EDRs and the utility of different levels of data aggregation.

section focuses on participation data for the sector and general issues associated with rationalization and cooperative formation that are specific to this sector.

Unlike the proposal for the trawl CV sector, the Council has not yet established a purpose and needs statement for the pot CVs  $\geq 60$  ft sector or described the conditions that would motivate a change in management. If the Council chooses to move forward in investigating LAPP development for this Pacific cod sector, it should clearly articulate the concerns with the current management regime and the goals/objectives of a LAPP for the pot CVs  $\geq 60$  ft.

The number of participants in this fishery would make it difficult to form and maintain a non-regulatory voluntary cooperative. The freezer longline sector has successfully formed a voluntary cooperative, in part due to the relatively small number of participants in the BSAI and GOA Pacific cod fisheries all agreeing to the cooperative structure and bylaws. Because the pot CV  $\geq 60$  ft sector has 50 LLP licenses, all of which were active at some point in the fishery since 2003, and over 30 firms holding those LLP licenses, reaching an agreement that all eligible firms would always abide by is unlikely. This assumption is based on experience in the GOA CV trawl fishery where voluntary cooperatives, with a fleet of approximately this size, work best when the fishery would not be opened to directed fishing without the cooperative structure limiting capacity in a one-day fishery. As a result, this section will focus on a Council developed cooperative structure and not a voluntary cooperative structure, since it would be difficult to reduce the number of eligible LLP licenses by a sufficient number to ensure development of a voluntary cooperative.

## 5.1 Background

A summary of the BSAI pot CV  $\geq 60$  ft fishery was provided in the Pacific cod allocation review presented to the Council at its June 2019 meeting (NPFMC, 2019b). The pot CV  $\geq 60$  ft sector includes all vessels  $\geq 60$  ft operating as CVs using pot gear to harvest Pacific cod in the BSAI. As of January 1, 2003, pot CVs  $\geq 60$  ft must have a Pacific cod pot CV endorsement on their LLP license to target BS or AI Pacific cod from the open access fishery with pot gear, unless it is harvested for personal use bait.

The 2019 LLP license dataset indicates there were a total of 49 LLP licenses with a Pacific cod pot CV endorsement for the BS (see Table 1-1). Two of those licenses also had an AI endorsement. One LLP license only had an AI Pacific cod pot endorsement. These are the 50 groundfish LLP licenses that may currently be used for directed fishing for BSAI Pacific cod in the open access pot CV  $\geq 60$  ft sector.

As illustrated in Figure 1-1, the pot CV  $\geq 60$  ft sector is allocated 8.4 percent of the BSAI Pacific cod TAC. There are two BSAI Pacific cod seasons for the pot CV  $\geq 60$  ft sector: A-season which is January 1 to June 10 and B-season which is September 1 to December 31. Typically, the sector has a short A-season closing at the end of January or beginning of February, while the B-season, tends to remain open throughout the season, but on few occasions has closed in October or November.

The sector typically does not harvest all their allocation (see Table 6-5). Since Amendment 85 was implemented (2008), which established the current sector allocations, participants have harvested 73 percent of the sector allocation on average. Unharvested BSAI Pacific cod was reallocated throughout the fishing year to other sectors and has ranged from no reallocation in 2011 to a high of 6,750 mt in 2015. Reallocations were not made from the sector in 2018. That was the first year since 2011 when no Pacific cod was reallocated from the sector. The sector used more of their initial allocation because of the lower TAC and strong Pacific cod prices that increased participation (see Table 5-2 and Table 6-4).

There are no PSC limits for halibut, crab, or salmon for the pot CV  $\geq 60$  ft sector. Halibut mortality for the sector ranges from a low of less than one mt in most years to a high of slightly over three mt in 2011 (see Table 5-1). This sector had some of the highest crab PSC of all the sectors (see Table 5-1).

**Table 5-1 Reported halibut and crab mortality in the trawl CV non-CDQ BSAI Pacific cod target fishery**

Species	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Halibut mortality (mt)	2	1.65	1.71	0.21	2.23	0.09	1.20	3.29	2.15	0.61	0.43	0.47	0.70	0.62	0.17
Red King crab	408	2,994	3,652	22,733	20,358	1,437	1,069	7,866	1,834	22,430	19,061	19,875	309	8,716	242,567
C. bairdi	25,294	92,528	211,226	430,990	839,641	267,264	198,074	114,981	43,355	62,215	108,234	148,669	48,736	133,249	154,486
C. opilio PSC (COBLZ)	1,000	7,377	7,120	229,603	51,793	6,520	17,333	258	1	0	0	0	0	1,396	25
Other C. opilio	44,602	76,200	189,097	556,794	235,668	61,927	261,829	41,494	7,363	4,744	29,101	35,710	1,334	27,631	2,579

Source: AKFIN, May 2019. Sector\_PSC (4-16-19)

## 5.2 Fishery Participation

In the federal BSAI Pacific cod target fishery, the number of participating pot CVs  $\geq 60$  ft has declined since implementation of Amendment 85. Overall, vessel counts in the federal BSAI Pacific cod target fishery has ranged from a low of 23 CVs in 2015 to a high of 54 CVs in 2003. The sector routinely harvests its entire A-season allocation by the end of January or early February thereby closing directed fishing early, while the B-season is a slower fishery which in the past has often resulted in a reallocation of a third of their initial allocation to other sectors. However, in 2018, the sector harvested its entire initial allocation for the first time over the 2005 through 2018 period (see Table 6-5). If the sector does not harvest its allocation in the future the Council may wish to consider potential contingency plans to address unharvested quota.

Table 5-2 provides a summary of the 2003 through 2018 federal open access BSAI Pacific cod pot CV  $\geq 60$  ft fishery. As stated earlier, there are 50 LLP licenses that can participate in the fishery and all 50 reported some catch over the 2003 through 2018 period. In the most recent years, they delivered their catch to between seven and nine processors. Nearly all its sector allocation is harvested in the BS. The sector only targets Pacific cod and some sablefish IFQ, they do not catch Pacific cod as incidental catch in other groundfish fisheries.

**Table 5-2 BSAI Pacific cod catch in the Federal Open Access Pacific cod target fishery by CVs  $\geq 60$  ft using pot gear, 2003 through 2018**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total	
AI																		
Weight (mt)				*	*												1,282	1,682
LLP Licenses				1	1												3	4
Vessels				4	2												3	8
Processing Plants				2	1												3	5
BS																		
Weight (mt)	14,448	10,568	11,522	*	*	11,227	6,476	11,589	16,404	12,721	12,436	11,136	10,408	11,028	13,725	13,952	191,603	
LLP Licenses	36	39	37	40	42	41	26	30	36	33	33	33	25	27	36	34	49	
Vessels	54	53	45	45	45	41	26	30	33	29	31	31	23	25	34	31	83	
Processing Plants	10	11	10	14	10	10	9	8	9	7	8	8	8	9	8	8	26	
Total																		
Weight (mt)	14,448	10,568	11,522	12,843	11,521	11,227	6,476	11,589	16,404	12,721	12,436	11,136	10,408	11,028	13,725	15,234	193,285	
LLP Licenses	36	39	37	40	42	41	26	30	36	33	33	33	25	27	36	37	50	
Vessels	54	53	45	49	46	41	26	30	33	29	31	31	23	25	34	34	88	
Processing Plants	10	11	10	15	10	10	9	8	9	7	8	8	8	9	8	9	28	

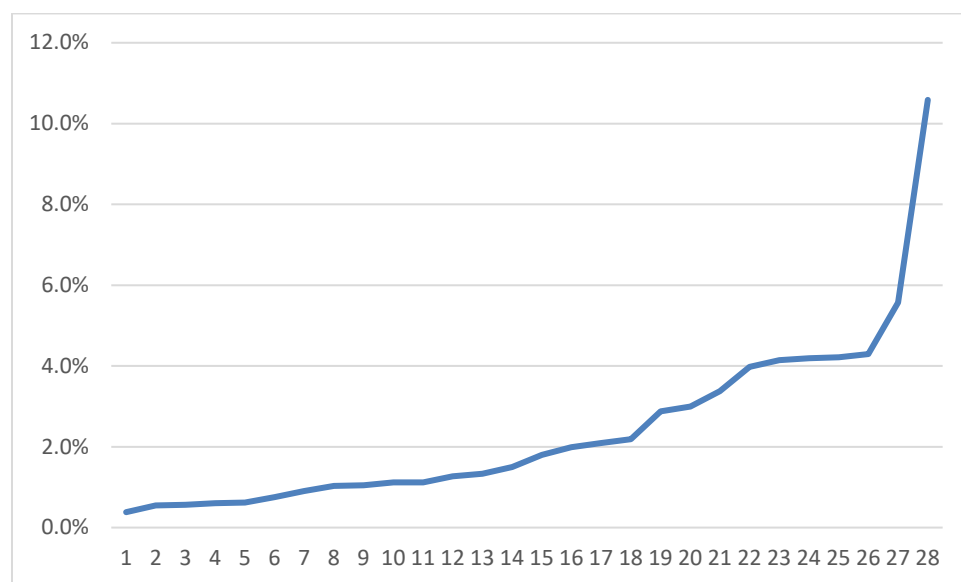
Note: \* indicates data was hidden to protect confidential information.

Source: AKFIN summary of CAS data (BSAI\_POT\_LL\_PCODLANDINGS(5\_20\_2019))

Like the trawl CV sector, if the Council moves forward with pot CV  $\geq 60$  ft LAPP, catch by non-Federal pot CVs  $\geq 60$  ft in the BSAI Pacific cod parallel fishery will likely need to be accounted for via an ICA. Since 2010, 16 pot CVs  $\geq 60$  ft have participated in the BSAI Pacific cod parallel fishery from 2010 through 2019. Only one pot CV  $\geq 60$  ft participated in the parallel fishery that did not have both an LLP and FFP. The remaining 15 pot CVs  $\geq 60$  ft had either an LLP or FFP or both. In last three years, four pot CVs  $\geq 60$  ft participated in the parallel fishery harvested between 253 mt and 765 mt, which accounted for between 2.8 percent and 5.6 percent of the total catch of BSAI Pacific cod for the sector.

Figure 5-1 shows the percentage of pot CV  $\geq$  60 ft targeted Pacific cod catch, by LLP holder address during the 2010 through 2018 fishing years relative to the total catch of the same LLP holders. This information may be useful when considering development of alternatives for ownership and use caps. Catch was aggregated by LLP license holder's address as reported in the 2019 LLP License database. About 0.6 percent of the reported catch did not have an LLP license number listed and was excluded from the calculations. If the Council moves forward with a LAPP for the sector analysts would need to determine how to treat this associated catch. The four smallest and largest reported catches, by address, were averaged to protect confidential data. This was done because persons with knowledge of the fishery may be able to determine which firms are associated with the most or least catch.

**Figure 5-1 Percentage of 2010 through 2018 pot CV  $\geq$  60 ft catch of target Pacific cod by LLP holder's address**



Note: The four smallest and largest amounts were averaged to protect confidential information.

The reported addresses were associated with between one to five LLP licenses. In general, addresses associated with the most LLP licenses also reported higher catch levels. The addresses associated with the five largest catch histories all accounted for more than 5.5 percent of the sector's catch from 2010 through 2018. The top four averaged just over 10.5 percent of the sector's catch.

### 5.3 Sideboard Limits

All LLP licenses that have a Pacific cod pot endorsement also have an associated crab LLP license. Crab fisheries are managed under the Crab Rationalization program that established sideboard limits on certain qualified vessels in the GOA fisheries. Sideboard limits were established because the Council understood that rationalizing the BSAI crab fisheries could provide opportunities for fishermen to consolidate their quota and take greater advantage of other fisheries. Thus, the Council established GOA sideboard limits for vessels and LLP licenses that had Bering Sea snow crab history and generated crab quota shares, due to the timing and length of this fishery relative to the groundfish fisheries (NPFMC, 2012b).

GOA Pacific cod sideboard limits for non-AFA crab vessels were based on retained catch of Pacific cod by vessels subject to the limit, divided by the total retained catch of GOA Pacific cod by all groundfish vessels from 1996 through 2000. AFA vessels were already subject to sideboard limits under the AFA program. In contrast, GOA groundfish sideboard limits for non-AFA crab vessels are based on GOA groundfish landings by vessels subject to the sideboard, relative to groundfish landings by all vessels. In addition to the GOA groundfish sideboards for the non-AFA crab vessels, participation in the GOA

Pacific cod fishery is restricted. Vessels that qualified for Bering Sea snow crab quota share must have landed more than 50 mt of groundfish harvested from the GOA between January 1, 1996, and December 31, 2000, in order to qualify to participate in the GOA Pacific cod fishery. This restriction also applies to any vessel named on an LLP license that generated Bering Sea snow crab fishery quota share.

To protect non-AFA crab vessels that demonstrated dependence on the GOA Pacific cod fishery, an exemption from the Pacific cod sideboards was included in the crab rationalization program. The catch history of the exempt vessels was not included in the sideboard calculations. Since their historical catch was not included in the sideboard limits, catch by these vessels does not count towards the sideboard caps, nor are the exempt vessels required to stop fishing when the sideboard limit is reached if the directed fishery is open. Of the 227 non-AFA crab vessels that made a landing of Bering Sea snow crab during the 1996 to 2000 period, 82 vessels are allowed to target GOA Pacific cod, but are limited by GOA Pacific cod sideboards. Of those 82 non-AFA crab vessels restricted by GOA Pacific cod sideboard limits, 76 are CVs. LLP licenses that originated on a qualified non-AFA crab vessel are also subject to the GOA Pacific cod sideboard limits. The 50 LLP licenses in the pot CV  $\geq$  60 ft sector are described below.

The LLP license data file reports the different types of crab sideboards applied to LLP licenses associated with  $\geq$  60 ft pot CV with a Pacific cod endorsement. The Crab Rationalization Program sideboard limits associated with the LLP licenses for the GOA are defined as follows:

- Crab Rationalization GOA Sideboarded; no GOA Pacific cod fishing: Subject to GOA groundfish directed fishery “sideboard” closures; may not engage in directed fishing for Pacific cod in the GOA.
- Crab Rationalization GOA Sideboarded: Subject to GOA groundfish directed fishery “sideboard” closures, including Pacific cod closures.
- Crab Rationalization GOA Sideboarded except Pacific cod: Subject to GOA groundfish directed fishery “sideboard” closures, not including Pacific cod closures.
- No Crab Rationalization Sideboard. Not subject to GOA sideboard limits.

**Table 5-3 LLP licenses on pot CVs  $\geq$  60 ft by Pacific cod pot endorsement and Crab Rationalization sideboard limits.**

Pcod Endorsements	CR GOA Sideboarded	CR GOA Sideboarded - except Pcod	CR GOA Sideboarded - no GOA Pcod Fishing	No CR Sideboard	Total
AI CV Pot				1	1
AI CV Pot; BS CV Pot				1	1
AI CV Pot; BS CV Pot; WG CV Pot	1				1
BS CV Pot	4			28	32
BS CV Pot; BS CV HAL; CG CV Pot	1				1
BS CV Pot; CG CV Pot	2				2
BS CV Pot; WG CV Pot	6	1	2	1	10
BS CV Pot; WG CV Pot; CG CV Pot		2			2
Total	14	3	2	31	50

Source: LLP license file for 2019  
CR= Crab Rationalization

Table 5-3 shows that of the 50 pot CV  $\geq$  60 ft sector LLP licenses, 30 have no Crab Rationalization sideboard, but do not have a GOA pot CV endorsement to fish Pacific cod. These will not need further restrictions on the fishing Pacific cod in the GOA. Two additional LLP licenses are subject to sideboard limits and are not allowed to fish Pacific cod in the GOA. Fourteen LLP licenses are subject to GOA sideboards for Pacific cod. Imposing additional restrictions on these LLP licenses may not be necessary, if the Crab Rationalization sideboard limits are considered to be sufficient. The remaining four LLP licenses are not subject to Crab Rationalization sideboard limits for the GOA. All four have a Western GOA Pacific cod pot endorsement to fish Pacific cod and to two of those four are also endorsed to fish

Pacific cod in the Central GOA with pot gear. The four LLP licenses are held by persons whose reported addresses are in Alaska cities Kenai, Kodiak, Unalaska, and Anchorage.

As part of the GOA Pacific cod sector allocation in 2012, the Council recommended operational and gear specific non-AFA crab sideboards based on participation in the GOA Pacific cod from 1996 through 2000. The Council considered and rejected combining the GOA inshore and offshore non-AFA crab sideboards into a single Central GOA and a single Western GOA sideboard limit. The Council was concerned that combining the inshore and offshore sideboards into a single amount for both catcher processors and CVs sectors could result in one gear or operational type preempting the other in a race for the sideboards. The Council was also concerned that an aggregate sideboard limit could have a negative impact on non-sideboarded vessels since the sideboard limit could be greater than some sector specific allocations.

## 6 Impacts of Proposed LAPPs on other Sectors

At its June 2019 meeting the Council requested that information be provided in this document relative to the spillover impacts of a trawl CV LAPP and/or pot CV  $\geq 60$  ft LAPP on other BSAI Pacific cod sectors. This section is provided to address that request. In particular, this section focuses on inseason rollovers of Pacific cod; the funders of rollovers, the receivers of rollovers, the how these redistributions of Pacific cod may affect other sectors under a new management regime. Additional spillover impacts on other sectors are also discussed relative to potential need for sideboards in Section 4.7.

The 2019 BSAI sector allocations of Pacific cod are provided in Table 6-1. This information is provided to show the relative sector allocations before any reallocation of Pacific cod occurs inseason. Sector allocations are established in regulation as a percentage of the total amount of Pacific cod available after deductions are made for the CDQ fishery (see Figure 1-1 for further illustration of this process).

**Table 6-1 BSAI non-CDQ Pacific cod sector apportionment and BSAI non-CDQ Pacific cod seasonal allowance for 2019**

Sector	BSAI Sector Apportionment (mt)	BSAI Season allowance (mt)		
		A	B	
H&L/pot < 60'	3,109	No seasonal allowance		
H&L CV $\geq 60$ '	311	159	152	
H&L CP	75,705	38,610	37,095	
Pot CV $\geq 60$ '	13,058	6,660	6,398	
Pot CP	2,332	1,189	1,143	
Sector	BSAI Sector Apportionment (mt)	BSAI Season allowance (mt)		
		A	B	C
Jig vessels	2,186	1,311	437	437
AFA trawl CP	3,591	2,693	898	0
Amendment 80	20,919	15,689	5,230	0
Trawl CV	34,500	25,530	3,795	5,175

Source: NMFS Final Specifications

Note: The sum of the seasonal apportionments may not equal the sector allocation due to rounding.

One concern expressed by stakeholders was the impact rationalization of the trawl CV and pot CV  $\geq 60$  ft sectors, may have on inseason reallocations of Pacific cod to other sectors. Located on the NMFS website is a reallocation table that provides a detailed summary of the Pacific cod allocations and reallocations from 1995 through 2018 for each sector. Information in that table shows each reallocation that occurred by sector, including the amount each sector funded or received. There is some annual variation by year, but the primary users of rollovers are the <60 ft hook-and-line and pot CV sector vessels. The primary funders of the reallocation are the trawl CV sector, the pot CV  $\geq 60$  ft sector, and the jig sector. The



detailed information in that appendix shows the total TAC (CDQ is not deducted), the initial sector allocation in metric tons and as a percentage of the non-CDQ TAC, and the sector allocation after reallocation of Pacific cod. Those data are summarized by sector in the series of tables that follows.

Table 6-2 shows the reallocation summary for the HAL/pot CV < 60 ft sector. The sector has received a reallocation of Pacific cod each year since 2004 and the reallocation to the sector has been at least 4,000 mt every year after 2010. In the five most recent years reported in the table, the reallocation amount had ranged from 5,000 mt to 7,500 mt.

**Table 6-2 HAL/pot CV <60 ft BSAI Pacific cod sector allocations**

Year	Total TAC	Initial Allocation		After Reallocations		
		mt	% of non-CDQ TAC	mt	Change (mt)	% of non-CDQ TAC
1995	250,000	NA	NA	NA		NA
1996	270,000	NA	NA	NA		NA
1997	270,000	NA	NA	NA		NA
1998	210,000	NA	NA	NA		NA
1999	177,000	NA	NA	NA		NA
2000	193,000	1,268	0.7%	1,230	-38	0.7%
2001	188,000	1,235	0.7%	1,235	0	0.7%
2002	200,000	1,314	0.7%	1,314	0	0.7%
2003	207,500	1,363	0.7%	1,363	0	0.7%
2004	215,500	1,416	0.7%	2,961	1,545	1.5%
2005	206,000	1,354	0.7%	2,601	1,247	1.4%
2006	189,768	1,246	0.7%	3,242	1,996	1.9%
2007	170,720	1,121	0.7%	2,928	1,807	1.9%
2008	170,720	3,033	2.0%	5,210	2,177	3.4%
2009	176,540	3,137	2.0%	4,434	1,297	2.8%
2010	168,780	2,998	2.0%	5,509	2,511	3.7%
2011	227,950	4,055	2.0%	9,005	4,950	4.4%
2012	261,000	4,645	2.0%	8,880	4,235	3.8%
2013	260,000	4,627	2.0%	9,177	4,550	4.0%
2014	253,894	4,518	2.0%	12,018	7,500	5.3%
2015	249,422	4,438	2.0%	10,630	6,192	4.8%
2016	251,519	4,476	2.0%	10,674	6,198	4.8%
2017	239,399	4,259	2.0%	9,271	5,012	4.3%
2018	203,831	3,627	2.0%	8,748	5,121	4.8%

Source: Summary of data as developed by NMFS Inseason Management

Table 6-3 shows that from 2003 through 2018, 66 unique CVs reported making Pacific cod landings in the HAL/pot CV <60 ft sector allocation. The number of vessels participating ranged from a low of seven in 2003 to a high of 26 in 2018. On average these vessels harvested 92 percent of the sector's final allocation (after reallocations). This information indicates these vessels are likely dependent on reallocation to the sector. The sector does not have seasonal allowances. Nevertheless, there appears to be a gradual shortening of the initial fishing period when the sector harvests its initial allocation. Prior to 2006, the sector did not have its first closure before April. Between 2006 and 2014, the sector's first closure occurred in March. Since 2014, the sector's first closure is early February. Once the sector has harvested its initial allocation, reallocations from other sectors can open the fishery as early as late April or early May. Another typically period of reallocations that can allow the sector to target BSAI Pacific cod is mid-August to early September. Typically, the fall reallocation is sufficient to allow the fishery to remain open for the remainder of the year.

**Table 6-3 HAL/pot CV < 60 ft sector BSAI Pacific cod harvest and final sector allocation 2003 through 2018**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total
Reported Harvest (mt)	1,371	2,560	2,119	3,294	3,132	4,297	4,040	5,159	7,563	8,304	8,456	10,293	9,304	10,301	9,880	7,735	97,807
Final Allocation (mt)	1,363	2,961	2,601	3,242	2,928	5,210	4,434	5,509	9,005	8,880	9,177	12,018	10,630	10,674	9,271	8,748	106,651
% harvested	101%	86%	81%	102%	107%	82%	91%	94%	84%	94%	92%	86%	88%	97%	107%	88%	92%
Vessels	7	11	12	16	16	15	15	14	15	19	21	15	21	21	22	26	66

Source: AKFIN summary of CAS data and final allocation for sector.

Table 6-4 shows the initial and final BSAI Pacific cod allocations for the trawl CV sector. Trawl CVs did not have their own allocation until 1997. The current allocation of 22.1 percent of the non-CDQ fishery has been in place since 2008. From 2008 through 2018 between 2,200 mt (2018) and 11,370 mt (2015) have been reallocated away from the sector. Over those 11 years the reallocations away from the sector averaged 5,235 mt. However, in the three most recent years the reallocation has been less than the average. Relatively strong Pacific cod prices and markets as well as a declining TAC may play a role in less Pacific cod being rolled over to other sectors.

**Table 6-4 Trawl CV BSAI Pacific cod sector allocations**

Year	Total TAC	Initial Allocation		After Reallocations		
		mt	% of non-CDQ TAC	mt	Change (mt)	% of non-CDQ TAC
1995	250,000	NA	NA	NA	NA	NA
1996	270,000	NA	NA	NA	NA	NA
1997	270,000	63,450	26.2%	63,450	0	26.2%
1998	210,000	45,649	24.2%	45,649	0	24.2%
1999	177,000	38,475	24.2%	38,475	0	24.2%
2000	193,000	41,953	24.2%	41,953	0	24.2%
2001	188,000	40,867	24.2%	26,867	-14,000	16.0%
2002	200,000	43,475	24.2%	41,475	-2,000	23.2%
2003	207,500	45,105	24.2%	43,434	-1,671	23.4%
2004	215,500	46,844	24.2%	40,717	-6,127	21.2%
2005	206,000	44,779	24.2%	35,847	-8,932	19.5%
2006	189,768	41,251	24.2%	33,824	-7,427	20.0%
2007	170,720	37,110	24.2%	34,110	-3,000	22.4%
2008	170,720	33,692	22.1%	30,842	-2,850	20.2%
2009	176,540	34,841	22.1%	29,740	-5,101	18.9%
2010	168,780	33,309	22.1%	28,175	-5,134	18.7%
2011	227,950	44,987	22.1%	39,897	-5,090	19.6%
2012	261,000	51,509	22.1%	47,749	-3,760	20.5%
2013	260,000	51,312	22.1%	43,812	-7,500	18.9%
2014	253,894	50,107	22.1%	43,107	-7,000	19.0%
2015	249,422	49,224	22.1%	37,854	-11,370	17.0%
2016	251,519	49,638	22.1%	45,138	-4,500	20.1%
2017	239,399	47,246	22.1%	44,163	-3,083	20.7%
2018	203,831	40,227	22.1%	38,027	-2,200	20.9%

Source: Summary of data as developed by NMFS Inseason Management

Table 6-5 shows the initial and final BSAI Pacific cod allocations for the pot CV  $\geq$  60 ft sector. The sector did not have their own allocation until 2004. The current allocation of 8.4 percent of the non-CDQ fishery has been in place since 2008. Reallocations away from the sector have ranged from 0 mt (2011 and 2018) to 6,750 mt (2015). The average annual amount of Pacific cod rolled over from the sector from 2008 through 2018 was 3,944 mt.

**Table 6-5 Pot CV  $\geq$ 60 ft BSAI Pacific cod sector allocations**

Year	Total TAC	Initial Allocation		After Reallocations		
		mt	% of non-CDQ TAC	mt	Change (mt)	% of non-CDQ TAC
1995	250,000	NA	NA	NA	NA	NA
1996	270,000	NA	NA	NA	NA	NA
1997	270,000	NA	NA	NA	NA	NA
1998	210,000	NA	NA	NA	NA	NA
1999	177,000	NA	NA	NA	NA	NA
2000	193,000	NA	NA	NA	NA	NA
2001	188,000	NA	NA	NA	NA	NA
2002	200,000	NA	NA	NA	NA	NA
2003	207,500	NA	NA	NA	NA	NA
2004	215,500	15,174	7.8%	11,735	-3,439	6.1%
2005	206,000	14,502	7.8%	12,828	-1,674	7.0%
2006	189,768	13,354	7.8%	13,880	526	8.2%
2007	170,720	12,006	7.8%	12,129	123	8.0%
2008	170,720	12,737	8.4%	11,422	-1,315	7.5%
2009	176,540	13,173	8.4%	6,373	-6,800	4.0%
2010	168,780	12,591	8.4%	11,576	-1,015	7.7%
2011	227,950	17,030	8.4%	17,030	0	8.4%
2012	261,000	19,509	8.4%	13,209	-6,300	5.7%
2013	260,000	19,434	8.4%	13,434	-6,000	5.8%
2014	253,894	18,976	8.4%	14,476	-4,500	6.4%
2015	249,422	18,641	8.4%	11,891	-6,750	5.3%
2016	251,519	18,798	8.4%	12,098	-6,700	5.4%
2017	239,399	17,889	8.4%	13,889	-4,000	6.5%
2018	203,831	15,235	8.4%	15,235	0	8.4%

Source: Summary of data as developed by NMFS Inseason Management

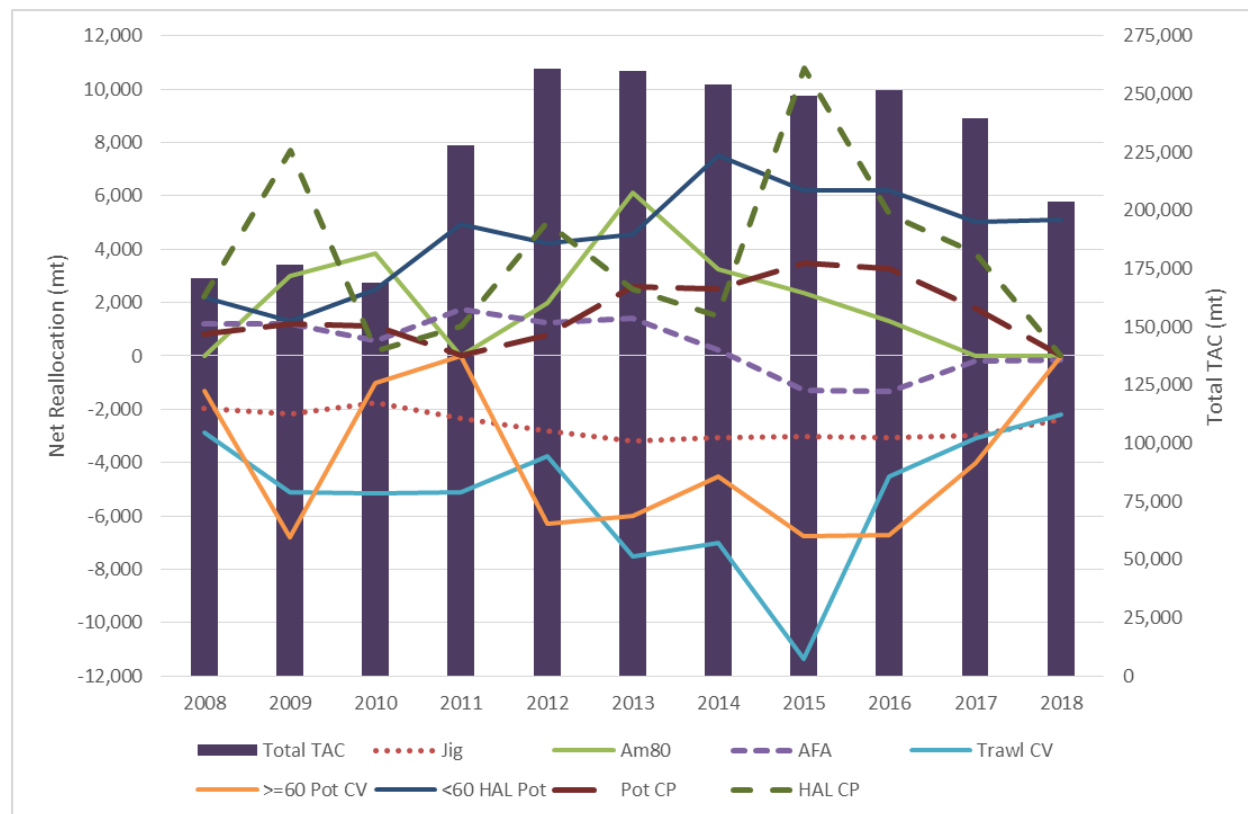
Figure 6-1 provides a summary of the total BSAI Pacific cod TAC and annual reallocations by sector and the total TAC. This figure shows that the primary suppliers of reallocations are the trawl CV, pot CVs  $\geq$  60 ft, and the jig sector.

Moving to a cooperative structure for the trawl CV sector and the pot CVs  $\geq$  60 ft sector would be expected to reduce the amount of reallocations from these sectors as well as to change the timing of those reallocations to later in the year. The amount of Pacific cod that may be rolled over from the trawl CV sector and the pot CVs  $\geq$  60 ft sector in the future could decline since the cooperatives can be more deterministic in their effort in the Pacific cod fishery by cooperating to more efficiently harvest Pacific cod. Because effort can be coordinated under a LAPP, the cooperatives can match effort to the amount of Pacific cod available without exceeding their allocations. Under the current structure NMFS needs to estimate the amount of catch per day based on total effort in the fishery and close the fishery to directed fishing before the sector allocation is fully harvested. The cooperative structure would allow members of the cooperative to harvest more of their allocation through control of individual vessels as opposed to NMFS management of the sector.

Under a LAPP, if there is any Pacific cod available when the cooperatives finish their fishing, it would not be available until the cooperative fishing year ends (November 1 for trawl vessels since the pot B season runs through December 31) or when the cooperative checks out of the fishery. For the trawl sector, reallocations may not be made until November when weather conditions may be worse for smaller vessels trying to use any Pacific cod that is reallocations. For the pot sector roll overs may only occur if the

cooperatives check out of the fishery. Under the current management structure, the timing of reallocations is described in the BSAI Stranded Pacific cod Discussion Paper scheduled for review during the October 2019 Council meeting.

**Figure 6-1 Summary of within year changes in BSAI Pacific cod allocations by sector, 2008 through 2018**



Source: Summary of data as developed by NMFS Inseason Management

The structure of the LAPP will also impact future reallocations of Pacific cod. If the trawl CV sector is allocated harvesting quota to fund directed fishing and an ICA is established for the incidental catch of Pacific cod in other fisheries, it may increase the likelihood that few reallocations would result from the directed fishery allocation.

In terms of the program's structure, the Council will need to determine if cooperative quota may be harvested any time while the Pacific cod trawl fishery is open to directed fishing or if the current fishing seasons would still apply to directed fishing. This could mean that all of the harvesting quota could be harvested in any combination of the A, B, or C seasons for trawl vessels and the A and B seasons for pot vessels. It is anticipated that most of the catch would be taken during the A-season when Pacific cod are more aggregated and catch rates are high (this decision point is further discussed in Section 4.4).

Table 6-6 shows the average percentage of non-CDQ trawl CV Pacific cod that was harvested by fishery and season from 2010 through 2018. Information in the table shows that of the Pacific cod harvested in the Pacific cod target fishery (88.5 percent of the Pacific cod target total) the vast majority was harvested in the A season 78.5 percent (or 88.7 percent of the targeted catch). Of the remaining targeted Pacific cod catch, 8.4 percent was taken in the B-season (9.5 percent of the Pacific cod target total) and 1.6 percent was taken in the C season (1.8 percent of the Pacific cod target total).

**Table 6-6 Percentage of Pacific cod harvested by trawl CV sector in reported target fishery and trawl CV season, 2010 through 2018**

Reported Target	Season			Total
	A	B	C	
Alaska Plaice - BSAI	0.0%	0.0%	0.0%	0.0%
Arrowtooth Flounder	0.0%	0.0%	0.0%	0.0%
Atka Mackerel	0.1%	0.0%	0.3%	0.4%
Flathead Sole	0.0%	0.0%	0.0%	0.0%
Other Species	0.0%	0.0%	0.0%	0.0%
Pacific Cod	78.5%	8.4%	1.6%	88.5%
Pollock - bottom	1.2%	0.2%	0.3%	1.6%
Pollock - midwater	3.6%	0.5%	3.0%	7.0%
Rock Sole - BSAI	0.0%	0.2%	0.0%	0.2%
Rockfish	0.0%	0.0%	0.1%	0.1%
Yellowfin Sole - BSAI	0.6%	0.7%	0.7%	2.1%
<b>Total</b>	<b>84.0%</b>	<b>10.0%</b>	<b>6.0%</b>	<b>100.0%</b>

Source: PSMFC summary of CAS data

As further discussed in Section 4.9.4 a trawl ICA could be established to fund other trawl CV fisheries throughout the year. The ICA could be used by vessels in a cooperative and those vessels that do not qualify or elect to not join a cooperative. The ICA would be set at a level that is expected to be needed to allow the trawl CV sector to harvest their other fisheries including the AFA cooperative allocations and the yellowfin sole fishery. Based on the information provided in Table 6-6, about 12 percent of the sector allocation of Pacific cod was used to support other target fisheries. If an ICA is established for the trawl CV fishery, additional discussion and analysis will be needed to determine if and when any unused ICA could be reallocated to other sectors.

## 7 Conclusions and Next Steps

After considering the information in the scoping paper and listening to public testimony, the Council could move forward with developing a LAPP for trawl CV sector and/or the pot CV  $\geq 60$  ft sector. If the Council determines that it lacks sufficient information to proceed with the developing program elements and options, it could make a focused request for information it needs to be brought back at a future meeting, prior to proceeding with formal development of the regulatory package.

The February 2019 motion for the trawl CV sector included a purpose and need statement. The motion made at that meeting for the pot CV  $\geq 60$  ft sector did not include a purpose and need statement, and thus will be needed if the Council moves forward with development of a LAPP for that sector. With a purpose and need statements developed, the Council could start crafting required and discretionary MSA provisions as components and options. Provisions described in the scoping paper include the LAPP program's cooperative structure, allocation decisions, processors and communities' considerations, ownership and use caps, sideboard limits, captain and crew considerations, bycatch/PSC management, and Inseason management and enforcement considerations. These types of components could apply to a pot CV  $\geq 60$  ft LAPP as well but will likely need additional contextual evaluation.

To assist the Council in development of the components and options, sections of this document begin with some of the key elements the Council might consider in developing the trawl CV and pot CV  $\geq 60$  ft LAPPs.

Moving forward, the LAPPs could be developed in conjunction with, or independent of each other. Developing the LAPPs together could result in some efficiencies but may result in slowing the development of one or both LAPPs. In addition, as noted in the scoping paper, each LAPP would likely be unique to the sector with little overlap between sectors. Combining the two programs in the analytical package would likely complicate an already challenging process. Developed independently, each LAPP

could proceed on its own timeline and could allow the Council the flexibility to prioritize development of the LAPPs. Given the early stage of development for both of the programs, staff has not attempted to provide a timeline for development of the two programs. The pace at which the programs move forward will be highly dependent on whether the Council moves forward with the programs, how focused the alternatives and options are for each program, and the priority assigned to developing the programs relative to other issues and workload assigned to the responsible staff.

## 8 Bibliography

- Alaska Fisheries Science Center and Alaska Regional Office [NMFS]. 2019. North Pacific Observer Program 2018 Annual Report. AFSC Process Rep. 2019-04, 148p. Alaska Fish. Sci. Cent., NOAA, Natl. Mar. Fish. Serv., 7600 Sand Point Way NE, Seattle WA 98115.
- Anderson, L. G., & Holliday, M. C. (2007). *The Design and Use of Limited Access Privilege Programs*. Silver Spring: NOAA Technical Memorandum NMFS-F/SPO-86.
- Deacon, R. T. (2019). *Managing Fisheries by Assigning Rights to Harvester Cooperatives*. Santa Barbara: University of California Santa Barbara.
- Fina, M. (2011). Evolution of Catch Share Management: Lessons from Catch Share Management in the North Pacific. *Fisheries*, 164-177.
- National Research Council. (1999). *Sharing the Fish: Toward a National Policy on Individual Fishing Quotas*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/6335>.
- North Pacific Fishery Management Council [NPFMC]. (2012a). Cooperative measures to address active participation and crew issues. Discussion paper. October 2012. Anchorage, AK.
- NPFMC. (2012b). Revising Freezer Longline GOA Pacific Cod Sideboards. Anchorage, AK.
- NPFMC. (2014). Five-Year Review of the Effects of Amendment 80. Anchorage, AK.
- NPFMC. (2017). Central GOA Rockfish Program Review – Including a Fishery Allocation Review. Anchorage, AK
- NPFMC. (2018). Elimination of AFA and Non-AFA Small Sideboards. Anchorage, AK.
- NPFMC. (2019a). Appendix 1 Final review draft Social Impact Assessment: Catcher/ processor mothership restrictions in the Bering Sea and Aleutian Islands and Gulf of Alaska when taking directed non-CDQ Pacific cod deliveries from trawl catcher vessels. Anchorage, AK.
- NPFMC. (2019b). BSAI Pacific cod Allocation Review. Anchorage, AK.
- NPFMC. 2019(c). Discussion paper: Alaska Region Economic Data Reporting Program. Anchorage, AK
- North Pacific Fishery Management Council/ National Marine Fisheries [NPFMC/ NMFS]. (2016). Twenty-year review of the Pacific halibut and sablefish individual fishing quota management program. December 2016. Anchorage, AK.
- Northern Economics, Inc. (2017). American Fisheries Act Program Review. Prepared for North Pacific Fishery Management Council. July 2017. Anchorage, AK.