

**PUBLIC REVIEW DRAFT**

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

**Limiting Access for Offshore Trawl CVs in the  
BSAI Trawl Limited Access Sector Yellowfin Sole  
Fishery**

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**Abstract:** This document analyzes proposed management measures that would limit access for trawl catcher vessels targeting Bering Sea and Aleutian Islands (BSAI) trawl limited access sector (TLAS) yellowfin sole for delivery of the catch to a mothership or catcher processor. The management measures under consideration also include options for ineligible CVs to target BSAI TLAS yellowfin sole during periods of high BSAI TLAS yellowfin sole allocations.

## List of Acronyms and Abbreviations

AAC	Alaska Administrative Code
ABC	acceptable biological catch
ADF&G	Alaska Department of Fish and Game
AFA	American Fisheries Act
AFSC	Alaska Fisheries Science Center
AKFIN	Alaska Fisheries Information Network
BEG	biological escapement goal
BOF	Board of Fish
BSAI	Bering Sea and Aleutian Islands
CAS	Catch Accounting System
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
COAR	Commercial Operators Annual Report
Council	North Pacific Fishery Management Council
CP	catcher/processor
CV	catcher vessel
DPS	distinct population segment
E	East
E.O.	Executive Order
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	essential fish habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	endangered species unit
FMA	Fisheries Monitoring and Analysis
FMP	fishery management plan
FONSI	Finding of No Significant Impact
FR	<i>Federal Register</i>
FRFA	Final Regulatory Flexibility Analysis
ft	foot or feet
GHL	guideline harvest level
GOA	Gulf of Alaska
ITAC	Initial total allowable catch
IRFA	Initial Regulatory Flexibility Analysis
IQF	individually quick frozen
lb(s)	pound(s)
LLP	license limitation program
LOA	length overall
m	meter or meters
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MMPA	Marine Mammal Protection Act
mt	ton, or metric ton
NAICS	North American Industry Classification System
NAO	NOAA Administrative Order
NEPA	National Environmental Policy Act
NMFS	National Marine Fishery Service

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## Executive Summary

This document analyzes proposed management measures that would limit access for trawl catcher vessels (CVs) targeting Bering Sea and Aleutian Islands (BSAI) trawl limited access sector (TLAS) yellowfin sole for delivery of the catch to a mothership or catcher processor. The management measures under consideration also include options for ineligible CVs to target BSAI TLAS yellowfin sole during periods of high BSAI TLAS yellowfin sole allocations.

## Purpose and Need

During the February 2016 meeting, the Council developed the following purpose and need statement:

*The Amendment 80 program assigns a portion of the BSAI yellowfin sole total allowable catch (TAC) to a TLAS fishery. Amendment 80 catcher processors (CPs) are precluded from fishing in the TLAS fishery, however they are not prohibited from acting as a mothership for CVs in this fishery. Since the implementation of the TLAS fishery in 2008, American Fisheries Act (AFA) and Non-AFA CVs, AFA CPs, floating processors, and Amendment 80 motherships have participated in the TLAS fishery. In 2015, vessels entered the TLAS fishery that had no previous participation. Historic participants are concerned about the impact of these new participants on their access to the yellowfin sole in the TLAS fishery.*

*The Council has recognized the concern of historic participants in the TLAS fishery by establishing a control date of October 13, 2015, that may be used as a reference date for a future management action to limit access to the offshore sector of the TLAS fishery. Limiting access may help ensure that the TLAS fishery continues to provide benefits to historic participants, mitigate the risk that a “race for fish” could develop, and help to maintain the consistently low rates of halibut bycatch in this fishery. The Council also recognizes that when the TAC assigned to the TLAS fishery is relatively high, opportunities for new entrants could be provided without unduly constraining historic participants.*

## Alternatives

**Alternative 1:** No Action-Status Quo

**Alternative 2:** A catcher vessel may target the BSAI TLAS yellowfin sole fishery and deliver its catch to a mothership or catcher/processor only if that catcher vessel is assigned an LLP that is credited with at least one trip target landing in the BSAI TLAS yellowfin sole fishery made to a mothership or catcher/processor between:

### Option 1

**Option 1.1:** 2008-2015

**Suboption 1.1.1:** in any year

**Suboption 1.1.2:** in any two years

**Option 1.2:** 2008-2016

**Suboption 1.2.1:** in any year

**Suboption 1.2.2:** in any two years

If more than one LLP license is assigned to a vessel that made at least one trip target in the BSAI TLAS fishery, the vessel owner must specify only one LLP license to receive credit with the landings made by that vessel when more than one LLP license was assigned to the vessel.

## **Option 2**

**Option 2.1:** All catcher vessels may target yellowfin sole in the BSAI TLAS fishery and deliver its catch to a mothership or catcher/processor if the TAC assigned to the BSAI TLAS yellowfin sole fishery is equal to or greater than:

- Suboption 2.1.1:** 15,000 mt
- Suboption 2.1.2:** 20,000 mt
- Suboption 2.1.3:** 25,000 mt
- Suboption 2.1.4:** 30,000 mt

**Option 2.2:** Catcher vessels that do not meet the landings qualification established under Option 1, may target yellowfin sole in the BSAI TLAS fishery and delivery to a mothership or catcher/processor only for that portion of the yellowfin sole TAC assigned to the BSAI TLAS fishery that is equal to or greater than:

- Suboption 2.2.1:** 15,000 mt
- Suboption 2.2.2:** 20,000 mt
- Suboption 2.2.3:** 25,000 mt
- Suboption 2.2.4:** 30,000 mt

The amount of halibut PSC that may be used by catcher vessels defined under Option 2.2 in the BSAI TLAS fishery may not exceed an amount determined by multiplying the proportional share of yellowfin sole available to those vessels by the amount of halibut PSC assigned to the yellowfin sole fishery.

## **Regulatory Impact Review**

### **Alternative 1: No Action**

The BSAI TLAS yellowfin sole fishery is almost entirely an offshore fishery composed of two groups: 1) AFA and non-AFA CVs that deliver to CPs acting as motherships, and 2) AFA CPs.

The first group of offshore participants is the CVs and motherships. Prior to 2015, the number of CVs has ranged from zero to three. In recent years, the number of CVs participating in the BSAI TLAS yellowfin sole fishery has increased to six in 2015, nine in 2016, and eight in 2017. Working in concert with the CVs in the BSAI TLAS yellowfin sole fishery are CPs acting as motherships. Since 2008, but prior to 2015, the number of participating motherships has generally been limited to one. Starting in 2015, the number of participating motherships expanded to include four new entrants for a total five motherships. In 2016, in addition to the existing motherships that participated in 2015, there was one new mothership entrant in the fishery for a total of six motherships. In 2017 thus far, there have been seven motherships participating in the fishery. Overall, under status quo, the limited allocation of BSAI TLAS yellowfin sole, wholesale and exvessel value of the fishery, and the need to find and maintain harvesters and buyers for processed yellowfin sole will likely limit expansion of fishing and processing effort. However,

recognizing that there are two new Amendment 80 CPs currently under construction, there is some potential that one or both of these Amendment 80 CPs acting as motherships in addition to the potential for one or four CVs as delivery platforms could enter the BSAI TLAS yellowfin sole fishery in the future if there is a perception of economic value in the fishery relative to other fishery opportunities.

The second group of offshore participants is the AFA CPs. In total, there were 13 AFA CPs that participated in the BSAI yellowfin sole fishery from 2008 through April 17, 2017. From a harvesting perspective, CPs have been a major contributor of BSAI TLAS yellowfin sole harvesting, but in recent years they have been losing ground to the CVs. Under the status quo alternative, AFA CPs will likely continue to participate in the BSAI TLAS yellowfin sole fishery, but their participation levels in the fishery will, in some degree, likely depend on the BSAI pollock fishery ITAC levels.

## **Alternative 2: Limited Access**

Under Suboption 1.1.1, eight CVs owned by five companies would qualify to target BSAI TLAS yellowfin sole and deliver their harvest to motherships, while under Suboption 1.1.2, three CVs owned by one company would qualify for the offshore fishery. Under Suboption 1.2.1, 10 CVs owned by seven companies would qualify to target BSAI TLAS yellowfin sole and deliver their harvest to motherships or CPs, and Suboption 1.2.2 would qualify seven CVs owned by four companies to participation in the offshore fishery.

One of the potential benefits of limiting CV access in the BSAI TLAS yellowfin sole fishery is it could help lengthen the fishery and reduce halibut PSC in the fishery through voluntary cooperative agreements between eligible CVs and the AFA CPs. By limiting the total number of CVs that can target BSAI TLAS yellowfin sole for delivery to offshore processors, ineligible CVs cannot enter the offshore fishery, which makes cooperative management easier to achieve between eligible CVs and AFA CPs. Of the four suboptions, Suboption 1.2.1 has less potential for the formation of a voluntary cooperative agreement between eligible CVs and AFA CPs since it would authorize 10 CVs owned by seven companies to participated in the BSAI TLAS yellowfin sole fishery, while Suboption 1.1.2 has the greatest potential for a voluntary cooperative agreement since the suboption limits eligibility to three CVs owned by one company.

Although the proposed action alternative does not directly prohibit mothership activity in the BSAI TLAS yellowfin sole fishery, the proposed action does indirectly limit mothership opportunities in the fishery by reducing the number of eligible CVs that can harvest and deliver BSAI TLAS yellowfin sole to motherships. Of the four suboptions, Suboption 1.1.2 would be the most limiting to mothership opportunities in the BSAI TLAS yellowfin sole fishery since it would authorize only three CVs, while Suboption 1.2.1 would provide the most opportunities for motherships to participate in the fishery since 10 CVs would be eligible to participate in the fishery.

A potential reason for the recent expansion in mothership activity in the BSAI TLAS yellowfin sole fishery could be, in part, due to increased production efficiencies from processing both BSAI TLA yellowfin sole and Amendment 80 yellowfin sole at the same time. Selection of Suboption 1.1.2 could reduce production efficiencies amongst BSAI TLAS yellowfin sole motherships that also operate as CPs in the Amendment 80 yellowfin sole fishery, whereas Suboption 1.2.1 would provide the most opportunity for production efficiencies in the fishery. Processing both TLAS yellowfin sole and Amendment 80 yellowfin sole at the same time likely lowers the marginal cost of production for each unit of yellowfin sole. Without the addition of BSAI TLAS yellowfin sole deliveries, it is possible that some of these motherships could experience a higher marginal cost of production enough to affect their Amendment 80 yellowfin sole operation.



## **Option 2.1 Removing CV Restriction**

Although this option could provide harvesting and processing opportunities for CVs delivering to offshore processors during periods of high BSAI yellowfin sole ITAC, this option does have some limitations. One limitation, given its specific metric ton amount for removing the eligibility requirements for the year, is its potential to encourage adversarial harvest specifications negotiations for BSAI yellowfin sole TAC. Another potential limitation of this option is it could reduce the incentive for CVs to reduce halibut mortality.

Since implementation of the BSAI TLAS yellowfin sole fishing in 2008, the TLAS allocation has exceeded the 15,000 mt trigger (Suboption 2.1.1) every year except one year, the 20,000 mt trigger (Suboption 2.1.2) and 25,000 mt trigger (Suboption 2.1.3) every year except three years, and the 30,000 mt threshold (Suboption 2.1.4) five of the past 10 years.

## **Option 2.2 Establishing BSAI TLAS Yellowfin Sole Limit for Ineligible CVs**

Looking at the range of suboptions under consideration against a backdrop of the previous 10 years of BSAI TLAS yellowfin sole allocations, the amount of BSAI TLA yellowfin sole available for ineligible CVs using Suboption 2.2.1 (15,000 mt) would have ranged from zero to 21,297 mt, while the associated halibut PSC limit for ineligible CVs would have ranged from zero to 88 mt limit. At the other extreme, Suboption 2.2.4 (30,000 mt), the yellowfin sole available for ineligible CVs would have ranged from zero to 6,297 mt, while associated halibut PSC would have ranged from zero to 26 mt. Overall, the 15,000 mt floor provides the greatest harvest opportunity for ineligible CVs, while providing the least amount of protection to historic participants from ineligible CVs. In contrast, the 30,000 mt floor provides the least amount of harvest opportunity for ineligible CVs, while providing the greatest amount of protection to historic participants from ineligible CVs.

There are likely some factors to consider in determining an appropriate BSAI TLAS yellowfin sole limit for ineligible CVs while also preventing these vessels from unduly constraining eligible CVs and participating AFA CPs. One factor is the linkage between the number of qualified eligible CVs determined in Option 1 and the limit for ineligible CVs. In considering this linkage, balance between providing sufficient protection for eligible CVs and AFA CPs while also providing harvest opportunities for ineligible CVs when sufficient BSAI TLAS yellowfin sole allocation exist should be considered.

Another factor in determining an appropriate limit for ineligible CVs and protecting historic participants is the potential impacts to the harvest specifications negotiations for BSAI yellowfin sole TAC. If the number of eligible CVs is small relative to the number of ineligible CVs, the option could result in some difficulty during harvest specifications between historic participants and ineligible CVs.

Finally, one of the benefits of Option 2.2, relative to Option 2.1, is that this option has the potential for lower halibut mortality while at the same time providing opportunities for ineligible CVs to participate in the fishery during periods of high TAC. Since this option limits the amount of BSAI TLAS yellowfin sole and halibut PSC available to ineligible CVs, the option provides an environment for eligible CVs to form voluntary cooperatives agreements with CPs, which could slow the pace of the fishery and reduce halibut mortality.

## Environmental Assessment

Any potential effects of the alternatives on the human environment component would be caused by limiting access to the fishery. The proposed regulatory change is not expected to affect all environmental components of the BSAI. The only components potentially affected as a result of the proposed action are the human environment, which may have socioeconomic impacts to fishery participants, and halibut PSC. Other environmental components: yellowfin sole, other prohibited species, marine mammals, seabirds, essential fish habitat, biodiversity and ecosystem health would not be affected by this proposed action. Given the limited scope of this proposed action, the human environment and halibut PSC in the BSAI management area are the only potential environmental component included in the EA.

### ES 1. Summary of effects of alternatives on CVs, CPs, and motherships

	Catcher vessels	Motherships	AFA Catcher processors
<b>Alternative 1 (Status quo)</b>	<ul style="list-style-type: none"> <li>Likely continue at same activity level, but there is some potential for a few new CVs entrants in the future if more motherships enter the fishery</li> </ul>	<ul style="list-style-type: none"> <li>Likely continue at same activity level, but there is some potential for a few new mothership entrants in the future</li> </ul>	<ul style="list-style-type: none"> <li>Likely continue at same level of participation, but effort will depend on BS pollock ITAC levels</li> </ul>
<b>Alternative 2</b>			
<b>Option 1</b>			
<b>Suboption 1.1.1.</b>	<ul style="list-style-type: none"> <li>8 CVs eligible, while all other CVs ineligible</li> <li>Greater potential for voluntary cooperative agreements with CPs and reduced halibut PSC</li> <li>Limited potential spillover effects in BSAI trawl CV Pacific cod fishery</li> </ul>	<ul style="list-style-type: none"> <li>Most motherships continue to participate in fishery since offshore processing opportunities are still available</li> </ul>	<ul style="list-style-type: none"> <li>Continued participation, but effort will depend on BS pollock ITAC levels</li> <li>Greater potential for voluntary cooperative agreements with eligible CVs</li> </ul>
<b>Suboption 1.1.2</b>	<ul style="list-style-type: none"> <li>3 CVs eligible, while all other CVs ineligible</li> <li>Greatest potential for voluntary cooperative agreements with CPs relative to all other suboptions under Option 1 and greatest potential for reduced halibut PSC</li> <li>Greatest potential for spillover effects in BSAI trawl CV Pacific cod fishery through increased fishing effort relative to all other suboptions under Option 1</li> </ul>	<ul style="list-style-type: none"> <li>Most motherships will exit the fishery since offshore processing opportunities are limited relative to all other suboptions under Option 1</li> </ul>	<ul style="list-style-type: none"> <li>Continued participation, but effort will depend on BS pollock ITAC levels</li> <li>Greatest potential for voluntary cooperative agreements with eligible CVs relative to all other suboptions under Option 1</li> </ul>
<b>Suboption 1.2.1</b>	<ul style="list-style-type: none"> <li>10 CVs eligible, while all other CVs ineligible</li> <li>Greater potential for voluntary cooperative agreements with CPs and lower halibut PSC</li> <li>Limited potential for spillover effects in BSAI trawl CV Pacific cod fishery</li> </ul>	<ul style="list-style-type: none"> <li>Greatest opportunity for motherships to continue to participate in fishery relative to all other suboptions under Option 1</li> </ul>	<ul style="list-style-type: none"> <li>Continued participation, but effort will depend on BS pollock ITAC levels</li> <li>Greater potential for voluntary cooperative agreements with eligible CVs</li> </ul>
<b>Suboption 1.2.2</b>	<ul style="list-style-type: none"> <li>7 CVs eligible, while all other CVs ineligible</li> <li>Greater potential for voluntary cooperative agreements with</li> </ul>	<ul style="list-style-type: none"> <li>Most motherships continue to participate in fishery since offshore processing opportunities</li> </ul>	<ul style="list-style-type: none"> <li>Continued participation, but effort will depend on BS pollock ITAC levels</li> <li>Greater potential for</li> </ul>

	<b>Catcher vessels</b>	<b>Motherships</b>	<b>AFA Catcher processors</b>
	CPs and lower halibut PSC • Limited potential for spillover effects in BSAI trawl CV Pacific cod fishery	are still available	voluntary cooperative agreements with eligible CVs

<b>Option 2</b>			
<b>Option 2.1</b>	<ul style="list-style-type: none"> <li>• Could provide harvesting opportunities for ineligible CVs during periods of high BSAI yellowfin sole TAC</li> <li>• Creates an adversarial environment during harvest specifications if Suboption 1.1.2 is selected</li> </ul>	<ul style="list-style-type: none"> <li>• Could provide processing opportunities given ineligible CVs could harvest BSAI TLAS yellowfin sole</li> </ul>	<ul style="list-style-type: none"> <li>• Continued participation, but effort will depend on BS pollock ITAC levels</li> </ul>
<b>Option 2.2</b>	<ul style="list-style-type: none"> <li>• Could provide harvesting opportunities for ineligible CVs</li> <li>• Balance between number of qualified CVs and the appropriate floor limit for the ineligible CVs is necessary for success of this option</li> <li>• Could create an adversarial environment during harvest specifications if Suboption 1.1.2 is selected</li> </ul>	<ul style="list-style-type: none"> <li>• Could provide processing opportunities given ineligible CVs could harvest BSAI TLAS yellowfin sole above established floor limit</li> </ul>	<ul style="list-style-type: none"> <li>• Continued participation, but effort will depend on BS pollock ITAC levels</li> </ul>

# 1 Introduction

This document analyzes proposed management measures that would limit access for trawl catcher vessels (CVs) targeting Bering Sea and Aleutian Islands (BSAI) trawl limited access (TLAS) yellowfin sole for delivery of the catch to a mothership or catcher processor. The management measures under consideration also include two options that provide fishing opportunities for catcher vessel that do not qualify for the catcher vessel limited access fishery in the BSAI TLAS yellowfin sole fishery.

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

## 2 Regulatory Impact Review

This RIR examines the benefits and costs of a proposed regulatory amendment to limit access for trawl CVs targeting BSAI TLAS yellowfin sole for delivery of the catch to a mothership or catcher processor.

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

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

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

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

### 2.1 Statutory Authority

Under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) (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 yellowfin sole fishery in the EEZ off Alaska is managed under the FMP for Groundfish of the BSAI. The proposed action under consideration would amend this FMP and Federal regulations at 50 CFR 679. Actions taken to amend FMPs or implement other regulations governing these fisheries must meet the requirements of Federal law and regulations.

## 2.2 Purpose and Need

During the February 2016 meeting, the Council developed the following purpose and need statement:

*The Amendment 80 program assigns a portion of the BSAI yellowfin sole (TAC) to a TLAS fishery. Amendment 80 CPs are precluded from fishing in the TLAS fishery, however they are not prohibited from acting as a mothership for CVs in this fishery. Since the implementation of the TLAS fishery in 2008, American Fisheries Act (AFA) and Non-AFA CVs, AFA CPs, floating processors, and Amendment 80 motherships have participated in the TLAS fishery. In 2015, new vessels entered the TLAS fishery. Historic participants are concerned about the impact of these new participants on their access to the yellowfin sole in the TLAS fishery.*

*The Council has recognized the concern of historic participants in the TLAS fishery by establishing a control date of October 13, 2015, that may be used as a reference date for a future management action to limit access to the offshore sector of the TLAS fishery. Limiting access may help ensure that the TLAS fishery continues to provide benefits to historic participants, mitigate the risk that a “race for fish”<sup>1</sup> could develop, and help to maintain the consistently low rates of halibut bycatch in this fishery. The Council also recognizes that when the TAC assigned to the TLAS fishery is relatively high, opportunities for new entrants could be provided without unduly constraining historic participants.*

## 2.3 History of this Action

### 2.3.1 October 2015

In October 2015, the Council received public testimony from a few participants in the offshore sector of the BSAI TLAS yellowfin sole fishery. Testimony indicated that several new vessels entered the fishery during 2015, and that new entrants were negatively impacting the ability of historical participants to maintain yellowfin sole harvest and may increase halibut prohibited species catch (PSC) in the fishery.

After considering this public testimony, the Council tasked staff to prepare a discussion paper that examines participation and effort in the yellowfin sole BSAI TLAS fishery in relation to a potential need to limit entry in the offshore sector in that fishery. To dampen the effect of speculative entry into the offshore sector of the yellowfin sole BSAI TLAS fishery in anticipation of potential future action to further limit access to the fishery, the Council announced a control date of October 13, 2015. The control date would not apply to trawl CVs that participate in the inshore sector of the yellowfin sole BSAI TLAS fishery. The control date may be used as a reference date for a future management action to further limit access to this offshore fishery. The Council clarified that the control date would neither obligate the Council to use this control date in any future management action, nor obligate the Council to take any action or prevent the Council from selecting another control date. NMFS published an advance notice of proposed rulemaking announcing the control date in the *Federal Register* (81 FR 72408, November 19, 2015) <https://alaskafisheries.noaa.gov/sites/default/files/80fr72408.pdf>.

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<sup>1</sup> Although a “race for fish” is not a term defined in Federal regulations, it can be described as a competitive derby fishery with fishermen racing each other to harvest as much fish as they can before the annual catch limit or the PSC limit is reached and the fishery is closed for the season or year. A derby fishery often results in shorter fishing seasons and unsafe fishing practices. It can also create a substantial disincentive for participants to take actions to reduce bycatch use and waste, particularly if those actions could reduce catch rates. In a derby fishery, participants who choose not to take actions to reduce bycatch and waste stand to gain additional catch by continuing to harvest at a higher bycatch rate, at the expense of any vessels engaged in bycatch avoidance.

### **2.3.2 February 2016**

In February 2016, the Council reviewed a discussion paper that examined participation and effort in the BSAI TLAS yellowfin sole fishery to determine the need to limit entry in the offshore fishery. After reviewing the discussion paper and hearing public testimony, the Council initiated an analysis to limit access for CVs in the offshore portion of the BSAI TLAS yellowfin sole fishery. Limiting access for CVs could have three primary benefits: 1) ensure that the limited access fishery continues to provide benefits to historic participants; 2) mitigate the risk that a “race for fish” could develop; and 3) maintain the consistently low rates of halibut bycatch in this fishery. The Council also recognized that when the TAC for BSAI yellowfin sole assigned to the TLAS fishery is relatively high, opportunities for new entrants could be provided without unduly constraining historic participants.

### **2.3.3 February 2017**

At the February 2017 meeting, the Council reviewed an initial review draft of an analysis to limit access for CVs in the offshore portion of the BSAI TLAS yellowfin sole fishery. The Council clarified that eligibility to participate in the offshore BSAI TLAS yellowfin sole fishery for CVs will be attached to the license limitation program (LLP) license assigned to the vessel that made at least one trip target in the fishery. If the CVs have more than one LLP assigned to the vessel, the vessel owner must specify to which license the eligibility would be attached. The Council also expanded the years used for eligibility to include 2016, and added an additional threshold trigger amount, 30,000 mt, for consideration in relieving the access limitation. Finally, the Council added a new threshold option that allows non-qualified CVs to target TLAS yellowfin sole and deliver to a mothership or catcher processor only for the portion of the yellowfin sole TAC assigned to the BSAI TLAS fishery that is greater than or equal to the threshold amount selected by the Council. In addition, the non-qualified CVs would be limited on the amount of halibut PSC assigned to the BSAI TLAS yellowfin sole fishery they could utilize. The amount of halibut PSC for the non-qualified CVs would be based on the proportional share of BSAI TLAS yellowfin sole that would be available for the non-qualified CVs.

The Council adjusted the language in Alternative 2 that limits access to the BSAI TLAS yellowfin sole fishery based on trip target rather than directed fishing activity. Directed fishing is defined as any fishing activity that results in retention of an amount of a species on board a vessel that is greater than the maximum retainable amount (MRA) for that species. Thus, limiting access to the BSAI TLAS yellowfin sole fishery based on directed fishing activity could result in offshore CVs qualifying based on incidental catch of yellowfin sole. Trip target is defined as an amount of retained aggregate groundfish species that is greater than the retained amount of any other groundfish species for that trip. Using trip target for eligibility limits the potential for vessels to qualify for participation in the BSAI TLAS yellowfin sole fishery based on their incidental catch of yellowfin sole. In addition, eligibility for previous limited access programs was based on trip target rather than directed fishing activity. Comparing the two approaches in the BSAI TLAS yellowfin sole fishery resulted in the same CVs qualifying using either approach. In the end, the Council opted to adjust the language in Alternative 2 because the use of trip target eliminates the potential for CVs qualifying based only on their incidental catch of BSAI TLAS yellowfin sole.

#### **2.3.3.1 Council discussion concerning LAPP provisions under MSA**

The Council also clarified during the February 2017 meeting that the action alternative does not meet the definition of Limited Access Privilege Program (LAPP) included in section 303A of the Magnuson-Stevens Act. Section 3 of the Magnuson-Stevens Act defines a LAPP as a Federal permit to harvest a quantity of fish representing a portion of the total allowable catch (TAC) of that fishery that may be

received or held for exclusive use by a person<sup>2</sup>. This proposed action limits CVs that can harvest BSAI TLAS yellowfin sole and deliver that harvest to a mothership or catcher processor, but does not assign a portion of the TAC for exclusive use by a person. The proposed action does not preclude CVs from harvesting BSAI TLAS yellowfin sole and delivering that harvest to shoreside processors. The proposed action does not limit the amount of BSAI TLAS yellowfin sole harvest for qualified CVs, rather it only limits those CVs that are eligible to participate in the fishery. The proposed action does not further limit CPs participating in the BSAI TLAS yellowfin sole fishery or assign a portion of the TAC for exclusive use by CPs. Finally, the Council has included options for ineligible CVs to harvest BSAI TLAS yellowfin sole when sufficient TLAS allocation exist.

## 2.4 Alternatives

**Alternative 1:** No Action-Status Quo

**Alternative 2:** A catcher vessel may target the BSAI trawl limited access yellowfin sole fishery and deliver its catch to a mothership or catcher/processor only if that catcher vessel is assigned an LLP that is credited with at least one trip target landing in the BSAI trawl limited access yellowfin sole fishery made to a mothership or catcher/processor between:

### Option 1

**Option 1.1:** 2008-2015

**Suboption 1.1.1:** in any year

**Suboption 1.1.2:** in any two years

**Option 1.2:** 2008-2016

**Suboption 1.2.1:** in any year

**Suboption 1.2.2:** in any two years

If more than one LLP license is assigned to a vessel that made at least one trip target in the BSAI trawl limited access fishery, the vessel owner must specify only one LLP license to receive credit with the landings made by that vessel when more than one LLP license was assigned to the vessel.

### Option 2

**Option 2.1:** All catcher vessels may target yellowfin sole in the BSAI trawl limited access fishery and deliver its catch to a mothership or catcher/processor if the TAC assigned to the trawl yellowfin sole limited access fishery is equal to or greater than:

**Suboption 2.1.1:** 15,000 mt

**Suboption 2.1.2:** 20,000 mt

**Suboption 2.1.3:** 25,000 mt

**Suboption 2.1.4:** 30,000 mt

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<sup>2</sup> Section 3 of the Magnuson-Stevens Act defines a person as any individual (whether or not a citizen or national of the United States), any corporation, partnership, association, or other entity (whether or not organized or existing under the laws of any State), and any Federal, State, local, or foreign government or any entity of any such government.



**Option 2.2:** Catcher vessels that do not meet the landings qualification established under Option 1, may target yellowfin sole in the BSAI trawl limited access fishery and delivery to a mothership or catcher/processor only for that portion of the yellowfin sole TAC assigned to the BSAI trawl limited access fishery that is equal to or greater than:

- Suboption 2.2.1:** 15,000 mt
- Suboption 2.2.2:** 20,000 mt
- Suboption 2.2.3:** 25,000 mt
- Suboption 2.2.4:** 30,000 mt

The amount of halibut PSC that may be used by catcher vessels defined under Option 2.2 in the BSAI trawl limited access fishery may not exceed an amount determined by multiplying the proportional share of yellowfin sole available to those vessels by the amount of halibut PSC assigned to the yellowfin sole fishery.

## 2.5 Methodology for analysis of impacts

The evaluation of impacts in this analysis is designed to meet the requirement of E.O. 12866, which dictates that an RIR evaluate the costs and benefits of the alternatives, to include both quantifiable and qualitative considerations. Additionally, the analysis should provide information for decision makers “to maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach.” The costs and benefits of this action with respect to these attributes are described in the sections that follow, comparing the No Action Alternative 1 with the action alternatives. The analyst then provides a qualitative assessment of the net benefit to the Nation of each alternative, compared to no action.

This analysis was prepared using data from the NMFS catch accounting system, which is the best available data to estimate total catch in the groundfish fisheries off Alaska. Total catch estimates are generated from information provided through a variety of required industry reports of harvest and at-sea discard, and data collected through an extensive fishery observer program. In the case of deliveries of BSAI yellowfin sole to motherships by CVs, estimates of catch originate from observer data.

In 2003, NMFS changed the methodologies used to determine catch estimates from the NMFS blend database (1995 through 2002) to the catch accounting system (2003 through present). The catch accounting system was implemented to better meet the increasing information needs of fisheries scientists and managers. Currently, the catch accounting system relies on data derived from a mixture of production and observer reports as the basis of the total catch estimates. The 2003 modifications in catch estimation included providing more frequent data summaries at finer spatial and fleet resolution, and the increased use of observer data. Redesigned observer program data collections were implemented in 2008, and include recording sample-specific information in lieu of pooled information, increased use of systematic sampling over simple random and opportunistic sampling, and decreased reliance on observer computations. Because of these modifications, NMFS is unable to recreate blend database estimates for total catch and retained catch after 2002. Therefore, NMFS is not able to reliably compare historical data from the blend database to the current catch accounting system.

## 2.6 Description of Fisheries

### 2.6.1 Description of BSAI Yellowfin Sole Management

The BSAI yellowfin sole fishery was historically managed as a single TAC until 1998 when 7.5% was allocated to the Community Development Quota (CDQ) Program (the allocation increased to 10.7% with the implementation of the Amendment 80 Program). During this period, NOAA Fisheries credited both directed harvest and the incidental harvest of yellowfin sole against the TAC, to prevent overharvest. For the non-CDQ allocation, directed fishing was allowed until the direct fishing allowance was reached. After a directed fishery was closed, NOAA Fisheries allowed vessels to retain incidental catch of a yellowfin sole taken in other directed fisheries until the TAC was taken. Retention of incidental catch, however, was limited to the maximum retainable amount (MRA), which is the percentage of yellowfin sole incidental catch relative to the retained directed species catch. Catch of a species more than the MRA had to be discarded. If the TAC for yellowfin sole was reached, NOAA Fisheries issued a prohibition on retention for yellowfin sole and all further catch of yellowfin sole had to be discarded. For the CDQ allocations, the CDQ groups manage their yellowfin sole allocations.

Starting in 2008, Amendment 80 established catch shares for several species, including yellowfin sole. Each year, NOAA Fisheries allocates an amount of Amendment 80 species available for harvest, called the initial allowable catch (ITAC), and crab and halibut PSC to the Amendment 80 sector and the BSAI TLAS sector. Allocations made to the Amendment 80 sector are not subject to harvest by participants in other fishery sectors, while the Amendment 80 sector is precluded from participating in the TLAS fisheries (NPFMC, 2007). The Council's intent of establishing the TLAS fisheries was to provide harvesting opportunities for American Fisheries Act (AFA) catcher processors (CPs), AFA CVs, and non-AFA CVs. Any portion of the BSAI TLAS fisheries not fully utilized may be reallocated to the Amendment 80 sector as cooperative quota on the approval of the Regional Administrator, but unused Amendment 80 allocations cannot be reallocated to the BSAI TLAS fisheries. The reallocation provision helps ensure that fishery resources would be allocated and available for harvest to the extent practicable. As noted in Table 2-15, there was reallocation of BSAI TLAS yellowfin sole to the Amendment 80 sector in 2009 for 6,000 mt, 2010 for 20,000 mt, and 2011 for 2,000 mt.

The ITAC represents the amount of TAC for each Amendment 80 species that is available for harvest, after allocations to the CDQ program and the incidental catch allowance (ICA) have been subtracted from the TAC. The ICA is set aside for the incidental harvest of an Amendment 80 species, while non-Amendment 80 vessels are targeting other groundfish species in non-trawl fisheries and in the BSAI TLAS sector fisheries.

Unlike other TLAS fisheries, the Council used a different approach in determining the Amendment 80 allocation and the TLAS allocation for yellowfin sole. The proportion of yellowfin sole ITAC allocated between the Amendment 80 and BSAI TLAS sectors depends on the yellowfin sole ITAC. Presented in Table 2-1 is the BSAI yellowfin sole allocation calculations for 2017 between the Amendment 80 sector and the BSAI TLAS fishery. As the ITAC for BSAI yellowfin sole increases, the proportion of the ITAC assigned to the BSAI TLAS also increases. The total ITAC allocated to the Amendment 80 sector and the BSAI TLAS fishery is determined by adding the sum of the percentage of ITAC allocations.

**Table 2-1 2017 allocation of BSAI yellowfin sole for Amendment 80 sector and the TLAS fishery**

BSAI yellowfin sole TAC (mt)	154,000			
CDQ allocation(10.7% x TAC) (mt)	16,478			
BSAI yellowfin sole ITAC (mt)	137,522			
BSAI yellowfin sole ICA (mt)	4,500			
Remaining BSAI YFS for allocation to AM80 and TLAS (mt)	133,022			
If the ITAC (after ICA has been removed) is...(mt)	% of BSAI yellowfin sole allocated to AM80 sector	% of BSAI yellowfin sole allocated to the TLAS	Amount of BSAI yellowfin sole allocated to AM80 sector (mt)	Amount of BSAI yellowfin sole allocated to TLAS (mt)
87,499	0.93	0.07	81,374	6,125
94,999-87,501	0.875	0.125	6,562	937
102,499-95,000	0.82	0.18	6,149	1,350
109,999-102,500	0.765	0.235	5,737	1,762
117,499-110,000	0.71	0.29	5,324	2,175
124,999-117,500	0.655	0.345	4,912	2,587
133,022-125,000	0.6	0.4	4,813	3,209
<b>Total BSAI yellowfin sole allocation</b>			<b>114,871</b>	<b>18,151</b>

Source: NMFS Final Specifications

TAC = total allowable catch

CDQ = community development quota

TLAS = trawl limited access sector

ITAC = TAC - CDQ

ICA = incidental catch allowance

The intent of increasing yellowfin sole allocations between to the BSAI TLAS was to better accommodate major shifts in the yellowfin sole trawl fisheries during periods of high yellowfin sole ITAC. In addition, this approach was thought to provide increasing harvest opportunities for some non-Amendment 80 trawl sectors, while also maintaining some consistency in the historical catch in Amendment 80 sector (NPFMC, 2007). Looking at the years considered when the Council was deliberating on Amendment 80 and the BSAI TLAS yellowfin sole allocations (1995 to 2004), two trawl sectors, other than the Amendment 80 sector, stood out as having catch history in the BSAI yellowfin sole fishery. From 1995 to 2004, the AFA CP sector on average harvested 10.6% of the BSAI yellowfin sole fishery and the AFA CV sector on average harvested 3.7% of the fishery. Narrowing the years to 1995 to 1999, the AFA CP sector, on average, harvested 17.8% of the BSAI yellowfin sole fishery, and the AFA CV sector harvested, on average, 6.5% of the fishery. Other than the Amendment 80 sector, the AFA CP and CV sectors were the only other primary participants in the BSAI yellowfin sole fishery during the 1995 to 2004 years.

Table 2-2 provides historical acceptable biological catch (ABC), TAC, ITAC, Amendment 80 and BSAI TLAS allocations for BSAI yellowfin sole, 2003 through 2017.

**Table 2-2 BSAI yellowfin sole ABC (mt), TAC (mt), ITAC (mt), AM80 (mt) and TLAS (mt) allocations, 2003 through 2017**

Year	ABC	TAC	ITAC*	AM80	BSAI TLA
2003	114,000	83,750	71,188		
2004	114,000	86,075	73,164		
2005	124,000	90,686	77,083		
2006	121,000	95,701	81,346		
2007	225,000	136,000	115,600		
2008	248,000	225,000	200,925	160,413	38,512
2009	210,000	210,000	187,530	146,376	39,154
2010	219,000	219,000	195,567	171,198	22,369
2011	240,000	196,000	175,028	140,875	32,153
2012	239,000	202,000	180,386	142,089	36,297
2013	203,000	198,000	176,814	139,946	34,868
2014	206,000	184,000	164,312	132,205	29,707
2015	239,800	149,000	133,057	120,912	16,165
2016	211,700	144,000	128,592	117,558	14,979
2017	260,800	154,000	137,522	114,871	18,151

Source: NMFS Final Specifications

TLA = trawl limited access

\*ITAC = TAC - CDQ

To help facilitate the BSAI TLAS yellowfin sole fishery, the Amendment 80 program relieves AFA sideboard limits for yellowfin sole when the yellowfin sole ITAC is equal to or greater than 125,000 metric tons (mt). The Council's intent for removing the BSAI yellowfin sole sideboards was to allow AFA sectors the potential to expand their harvest in the yellowfin sole fishery in periods of diminished availability of pollock (NPFMC, 2007). Because most of the yellowfin sole ITAC was allocated to the Amendment 80 sector for exclusive harvest, the need for AFA sideboard limits was greatly reduced since AFA vessels no longer directly compete with the Amendment 80 sector active in the yellowfin sole fishery.

Below a 125,000 mt ITAC, the yellowfin sole sideboard limits are based on the 1995 through 1997 aggregated retained catch of yellowfin sole for AFA CV sector and AFA CP sector relative to the total catch of yellowfin sole during the same period. The resulting ratios (.0647 for AFA CVs and .230 for AFA CPs) are then multiplied by the available yellowfin sole TAC minus the CDQ allocation. Table 2-3 provides the yellowfin sole sideboard limits for AFA CVs and CPs from 2003 through 2017. Since 2008, the yellowfin sole ITAC has been higher than 125,000 mt, so sideboard limits have not been in place for AFA vessels.

**Table 2-3 Yellowfin sole sideboard limits for AFA CVs and CPs from 2003 through 2017**

Year	ITAC*	AFA CV	AFA CP
2003	71,188	4,606	16,587
2004	73,164	4,734	17,047
2005	77,083	4,987	17,960
2006	81,346	5,263	18,954
2007	115,600	7,479	26,935
2008	200,925	None	None
2009	187,530	None	None
2010	195,567	None	None
2011	175,028	None	None
2012	180,386	None	None
2013	176,814	None	None
2014	164,312	None	None
2015	133,057	None	None
2016	127,592	None	None
2017	137,522	None	None

Source: NMFS Final Specifications

#### **2.6.1.1 Regulatory History of Amendment 80 Vessels as Motherships**

The proposed rules for Amendment 80 program, published May 30, 2007, (72 FR 30052), included prohibitions limiting Amendment 80 vessels from catching, receiving, and processing fish assigned to the BSAI trawl limited access sector. Although it was clear the Council intended to prohibit Amendment 80 vessels from catching Amendment 80 species in the BSAI TLAS sector, it was unclear if the Council considered or intended that Amendment 80 vessels should serve as processing platform for the BSAI TLAS sector.

Recognizing the Council's intent concerning Amendment 80 vessels as harvesters in the BSAI TLAS sector and the Council's silence on Amendment 80 vessels serving as a processing platform for harvesters in the TLAS sector, NMFS proposed rules to prohibit any Amendment 80 vessel from catching, receiving, or processing fish assigned to the BSAI TLAS sector. NMFS, as noted in the proposed rule, determined that this prohibition would best meet the Council's recommendation to provide an allocation of ITAC to the Amendment 80 sector, but not encourage the consolidation of fishing or processing operations in the BSAI TLAS sector. Additionally, allowing Amendment 80 vessels to receive and process fish caught by vessels in the BSAI TLAS sector could allow Amendment 80 vessels to serve as motherships (i.e., a processing platform that is not fixed to a single geographic location), or stationary floating processors, for the BSAI TLAS sector fleet. This could increase the potential that catch formerly delivered and processed onshore could be delivered and processed offshore. This change in processing operations could have economic effects. It was noted by NMFS that the Council did not specifically address these issues at the time of final Council action. NMFS also noted that combining Amendment 80 and BSAI TLAS sector catch on the same vessel could increase the potential recordkeeping and reporting, and monitoring and enforcement complexities.

As noted in the Final Regulatory Flexibility Analysis from the July 20, 2007, Secretarial Review, during the comment period for the Amendment 80 regulations that were published in the Federal Register on May 30, 2007, (72 FR 30052), several commenters expressed concern about § 679.7(o)(1)(ii) which would have prohibited an Amendment 80 vessel from catching, processing, or receiving Amendment 80

species, crab PSC, or halibut PSC assigned to the BSAI trawl limited access sector. The commenters indicated that this prohibition would limit the existing use of Amendment 80 vessels to receive and process unsorted catch delivery from other vessels. It was also noted by the commenters that the prohibition was not analyzed in the EA/RIR/IRFA at time of final action and could have an adverse impact on small entities, and therefore should be removed.

To address the comments, NMFS analyzed the effects of limiting the receipt of catch from the BSAI TLAS sector by non-Amendment 80 vessels (NPFMC, 2007). NMFS analyzed observer data from 2003-2006, a period chosen for analysis because it represented recent processing patterns during that period. The analysis indicates that the practice of delivering unsorted catch from non-Amendment 80 vessels to Amendment 80 vessels during the 2003-2006 period was not widespread. During that time period only one Amendment 80 vessel received unsorted catch from a non-Amendment 80 vessel in each year analyzed. The non-Amendment 80 vessel was owned by the same company that owns that Amendment 80 vessel. NMFS determined that proposed prohibition would limit the ability of this one entity to continue to deliver unsorted catch from its non-Amendment 80 CV to its Amendment 80 vessel.

Further, as noted in the final rule, Council intent was not clear regarding the regulation of catch assigned to the BSAI TLAS sector to be received and processed by Amendment 80 vessels. However, the Council did not expressly indicate its intent to limit the delivery of unsorted catch from the BSAI TLAS sector to Amendment 80 vessels. This lack of intent was noted in the preamble to the proposed rule and again at two public workshops on May 23, 2007 (72 FR 27798), and on June 18, 2007 (72 FR 31548), both of which were attended by numerous participants in the Amendment 80 and BSAI TLAS sectors, and a member of the Council participated in the workshops. In addition, NMFS provided a review of the proposed rule to the Council at its June 2007 meeting, specifically highlighting the issue of Amendment 80 vessels receiving unsorted catch from BSAI TLAS sector vessels and requesting that the Council provide comments if the proposed rule contravened Council intent. During that meeting, the Council did not indicate that it either intended or did not intend to allow catch from the BSAI TLAS sector to be delivered to Amendment 80 sector vessels. The Council did not provide any comments during the public comment period to indicate that limitations on the receipt and processing of unsorted catch from the BSAI TLAS sector by Amendment 80 vessels contravened Council intent.

As noted in the final rule published September 14, 2007, based on the additional analysis NMFS conducted and the lack of Council intent to the contrary, NMFS substantially modified the prohibition to allow the delivery and processing of unsorted catch from the BSAI TLAS sector to Amendment 80 vessels as currently practiced. This revision accommodated the one entity that NMFS identified as currently receiving unsorted catch from a catcher vessel in the BSAI TLAS sector to continue to do so. It was also noted in the final rule, that this revision would accommodate potential future growth in the use of Amendment 80 vessels as mothership vessels for vessels in the BSAI TLAS sector.

#### **2.6.1.2 Description of the BSAI TLAS Yellowfin Sole Fishery**

This section of the analysis examines the offshore participation and effort in the BSAI TLAS yellowfin sole fishery. Vessels that participate in the offshore sector of the BSAI TLAS yellowfin sole fishery include CVs, CPs, and motherships. Catcher vessels participate in the offshore sector by delivering yellowfin sole to CPs acting as motherships. Catcher processors participate in the offshore sector by catching and processing yellowfin sole or by receiving and processing deliveries of yellowfin sole from CVs. Motherships participate in the offshore sector by receiving and processing deliveries of yellowfin sole from CVs.

Table 2-4 provides data on BSAI TLAS yellowfin sole catch in relation to yellowfin sole ITAC and BSAI TLAS allocation from 2003 through April 17, 2017. Prior to implementation of the BSAI TLAS

yellowfin sole allocation in 2008, annual target catch of BSAI yellowfin sole by non-Amendment 80 vessels increased from 4,386 mt in 2004 to 22,214 mt in 2007. The increasing BSAI yellowfin sole target catch during this period is likely related to the increasing BSAI yellowfin sole ITAC, which increased from 71,188 mt in 2003 to 115,600 mt in 2007. During the first five years of the BSAI TLAS yellowfin sole fishery (2008 through 2012), fishing effort, combined with high allocations, were such that the fishery was not fully utilized. Harvest percentages ranged from a low of 31% in 2009 to a high of 87% in 2010, after accounting for the reapportionment of BSAI TLAS yellowfin sole allocation to the Amendment 80 sector (see Table 2-15 for reapportionments and dates). This was likely due, in part, to a combination of low wholesale prices in 2009 and 2010 (see Table 2-6) and fewer AFA CP vessels active in the fishery likely because of increasing pollock ITAC starting in 2011. Starting in the 2013, the BSAI TLAS yellowfin sole fishery was a fully utilized fishery. In 2013, 99% of the BSAI TLAS yellowfin sole allocation was harvested. In 2014, 93% of the BSAI TLAS yellowfin sole allocation was harvested, while in 2015 and 2016, the percent of allocation harvested was 99% and 98%, respectively. For 2017 thus far, only 54% of the BSAI TLAS yellowfin sole allocation has been harvested, but all indications are that the allocation will be fully utilized. Table 2-4 also provides annual incidental catch of BSAI yellowfin sole, which has ranged from a low of 232 mt in 2010 to a high of 3,370 mt in 2014. The largest portion of incidental catch occurs in the BSAI TLAS Pacific cod fishery. BSAI yellowfin sole incidental catch is accommodated by the ICA, which in 2017 was 4,500 mt.

**Table 2-4 Yellowfin sole ITAC, BSAI TLAS allocation, and target and incidental catch of yellowfin sole BSAI TLAS (2003 through April 17, 2017)**

Year	YFS ITAC (mt)	BSAI TLA YFS allocation (mt)	BSAI TLA YFS allocation as a % of YFS ITAC	BSAI YFS target catch from 2003-2007 <sup>2</sup> & BSAI TLA YFS target catch from 2008-2015 (mt)	BSAI TLA YFS target catch as a % of BSAI TLA allocation	BSAI YFS target catch as a % of YFS ITAC	YFS incidental catch (mt)
2003	71,188			4,461		6	853
2004	73,164			4,386		6	771
2005	77,083	N/A	N/A	7,995	N/A	10	904
2006	81,346			13,361		16	1,206
2007	115,600			22,214		19	887
2008 <sup>^</sup>	200,925	32,512	16	20,017	62	10	1,017
2009 <sup>^</sup>	187,530	33,154	18	10,181	31	5	2,506
2010 <sup>^</sup>	195,567	22,369	11	19,421	87	10	232
2011	175,028	32,153	18	25,485	79	15	1,632
2012	180,386	36,297	20	28,140	78	16	1,698
2013	176,814	34,868	20	34,606	99	20	2,534
2014	164,312	29,707	18	27,720	93	17	3,370
2015	133,057	16,165	12	16,073	99	12	2,691
2016	127,592	14,979	12	14,708	98	12	2,634
2017	137,522	18,151	13	9,745	54	7	999

Source: NMFS Final Specifications

Source file: BSAI\_Yellow fin(4-17-17); Current as of April 17, 2017

<sup>1</sup>ITAC = TAC - CDQ

<sup>2</sup>Catch of BSAI YFS target catch by AM80 vessels has been removed from BSAI YFS target catch (2003-2007)

<sup>^</sup>BSAI TLA YFS allocation was adjusted to account for reapportionment of YFS from the BSAI TLA to Amendment 80 (see Table 4 for amounts reapportioned)

TLA = trawl limited access

YFS = yellow fin sole

### 2.6.1.3 Halibut PSC in the BSAI TLAS Yellowfin Sole Fishery

As part of the Amendment 80 program, halibut PSC limit is allocated to the Amendment 80 sector and the BSAI TLAS fisheries (see Table 2-5). Starting in 2016, with the implementation of Amendment 111, the halibut PSC limit apportioned to the Amendment 80 sector will be 1,745 mt and the halibut PSC limit for the BSAI TLAS fisheries will be 745 mt. Of the 745 mt halibut PSC apportioned to the BSAI TLAS fisheries during 2016, 150 mt will be reserved for the yellowfin sole fishery. Table 2-5 provides the

halibut PSC limits for the trawl yellowfin sole fishery from 2003 through 2007. The table also provides the halibut PSC limits for all BSAI TLAS groundfish fisheries, BSAI TLAS yellowfin sole fishery, and the Amendment 80 sector from 2008 through 2017.

**Table 2-5 Halibut PSC limit for yellowfin sole trawl fishery (2003 through 2007), and all BSAI TLAS fisheries, BSAI TLAS yellowfin sole fishery, and Amendment 80 fisheries (2008 through 2017)**

Year	YFS trawl	BSAI TLA total	BSAI TLA YFS*	AM80
2003	886			
2004	886			
2005	886			
2006	886			
2007	886			
2008		875	241	2,525
2009		875	162	2,475
2010		875	187	2,425
2011		875	167	2,375
2012	N/A	875	167	2,325
2013		875	167	2,325
2014		875	227	2,325
2015		875	167	2,325
2016		745	150	1,745
2017		745	150	1,745

Source: NMFS Final Specifications

TLA = trawl limited access

YFS = yellow fin sole

\* BSAI TLA YFS halibut PSC limit is part of the BSAI TLA total halibut PSC limit

The process for reallocating halibut PSC limits in the BSAI groundfish fisheries varies by sector/fishery. For the Amendment 80 sector, the Regional Administrator may reallocate a portion of the halibut PSC limit from the BSAI TLAS fisheries to the Amendment 80 sector if Regional Administrator determines it is appropriate. For the BSAI TLAS fisheries, there are no regulations that authorize the reallocation of halibut PSC limit between fisheries. For halibut PSC to be reallocated between BSAI TLAS fisheries, the Regional Administrator, after determining some portion of halibut PSC in a BSAI TLAS fishery will go unused, and after consultation with the Council, and in accordance with § 679.21(e)(3)(i)(B), may reapportion that halibut PSC to another BSAI TLAS fishery by publishing a temporary rule. As an example, June 25, 2014, NMFS published a temporary rule to reapportion a projected unused 60 mt of the 2014 halibut PSC limit from the BSAI TLAS Pacific cod fishery to the BSAI TLAS yellowfin sole fishery. This action was necessary to provide opportunity for harvest of the 2014 BSAI TLAS yellowfin sole allocation by participating vessels. Table 2-15 provides details on the annual reallocations of halibut PSC limits.

## 2.6.2 Target Products and Markets

Table 2-6 provides production information and wholesale prices for the BSAI TLAS yellowfin sole fishery from 2003 through 2015. The primary products produced from the BSAI yellowfin sole fishery are headed and gutted (78%) and frozen whole fish (21%). Almost all yellowfin sole is exported to China where they are processed into fillets. These twice-frozen fillets are primarily sold as frozen skinless,



boneless 2-4 oz. fillets to distributors who sell the fish to retail and foodservice operators in Europe, Japan, and the U.S. (AFSC, 2016).

Table 2-7 provides annual estimated first wholesale value of the BSAI TLAS yellowfin sole fishery from 2003 through 2015. The estimated first wholesale value has ranged from a low of \$2.6 million in 2003 to high of \$26.7 million in 2013. In recent years first wholesale gross revenue of BSAI yellowfin sole has been in decline. This decline is due primarily to an increase in whitefish competition (AFSC, 2016). The price for BSAI yellowfin sole is highly dependent on when it is harvested (AFSC, 2016). Fish caught in the winter, prior to spawning, command higher prices, while flesh quality declines significantly during and after spawning, resulting in lower prices (AFSC, 2016).

**Table 2-6 Production and wholesale prices for BSAI TLAS yellowfin sole fishery from 2003 through 2015**

Year	H&G			Whole			Total	
	Price per pound	Pounds	Percent of total	Price per pound	Pounds	Percent of total	Price per pound	Pounds
2003	0.40	61,101,047	68	0.30	21,249,125	24	0.39	89,880,665
2004	0.47	62,118,170	71	0.35	23,494,155	27	0.44	86,973,075
2005	0.64	73,617,171	69	0.50	32,859,389	31	0.60	107,283,757
2006	0.66	85,904,595	66	0.51	42,816,237	33	0.61	130,177,777
2007	0.66	92,668,848	66	0.51	46,985,794	34	0.61	139,654,642
2008	0.61	120,735,619	83	0.49	25,282,075	17	0.59	146,125,719
2009	0.49	104,974,070	86	0.44	16,358,114	13	0.49	122,159,999
2010	0.54	111,079,619	80	0.41	26,811,905	19	0.52	138,856,135
2011	0.65	149,356,200	82	0.55	33,016,842	18	0.63	183,004,595
2012	0.63	146,442,117	80	0.63	37,294,222	20	0.63	183,736,339
2013	0.50	161,909,026	97	0.46	4,797,440	3	0.50	166,706,465
2014	0.45	149,799,808	81	0.46	36,022,497	19	0.45	185,822,304
2015	0.48	137,488,589	91	0.45	13,902,194	9	0.48	151,390,782

Source: BSAI\_Yellowfin\_Prices(9-16)

**Table 2-7 Estimated annual first wholesale value of BSAI TLAS yellowfin sole fishery from 2003 – 2015**

Year	Estimated annual wholesale value (\$)
2003	2,643,742
2004	2,875,157
2005	6,592,890
2006	12,043,983
2007	18,310,864
2008	13,509,660
2009	7,639,468
2010	13,606,860
2011	22,265,966
2012	24,481,344
2013	26,699,930
2014	17,811,813
2015	10,639,780

Source: Catch Accounting

## 2.7 Analysis of Impacts

This section presents a discussion of aspects of the economic and distributional effects that might be expected to occur because of limiting access for trawl CVs targeting BSAI yellow fin sole TLAS. The impetus for the proposed action by the Council originated from concern by historical participants in the

BSAI TLAS yellowfin sole fishery indicating that several new vessels entered the fishery during 2015, and that these new entrants were negatively impacting the ability of historical participants to maintain yellowfin sole harvest and may increase halibut PSC in the fishery. Limiting access may help ensure that the TLAS fishery continues to provide benefits to historic participants, mitigate the risk that a “race for fish” could develop, and help to maintain the consistently low rates of halibut PSC in this fishery. The Council also recognizes that when the TAC assigned to the TLAS fishery is relatively high, opportunities for new entrants could be provided without unduly constraining historic participants

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

## **2.7.1 Alternative 1, No Action**

Alternative 1 is the no action alternative. This alternative would not limit access for trawl CVs targeting BSAI TLAS yellowfin sole for delivery of the catch to a mothership or catcher processor. Under this alternative, CVs that are active in the BSAI TLAS yellowfin sole fishery could continue to be active in the fishery for the foreseeable future. To understand the impacts of this alternative, this section provides background information at the sector level that is intended to characterize the status quo alternative.

### **2.7.1.1 BSAI TLAS yellowfin sole fishery**

The BSAI TLAS yellowfin sole fishery is almost entirely an offshore fishery composed of two groups: 1) AFA CPs, and 2) AFA and non-AFA CVs that deliver to CPs acting as motherships. Prior to 2009, there were also two floaters that participated in the fishery as motherships, but those floaters have not participated in the fishery since 2008.

Looking first at the CPs, prior to 2008, the number of vessels ranged from 3 in 2003 to 9 in 2007. Since implementation of the BSAI TLAS yellowfin sole fishery in 2008, the number of CPs has ranged from a low of 8 in 2009 and 2013 to a high of 12 in 2008. In total, there were 13 unique CPs that participated in the BSAI yellowfin sole fishery from 2003 through April 17, 2017. All participating CPs are AFA vessels. Table 2-8 provides annual participation of these CPs from 2003 through April 17, 2017.

From a harvesting perspective, CPs have been a major participant in BSAI TLAS yellowfin sole fishery. In fact, up to 2015, CPs harvested 85% of the BSAI TLAS yellowfin sole catch. However, since 2015, the CP sector's percent of the BSAI TLAS yellowfin catch has diminished to an average of 54%. As noted in Table 2-9, in 2015, 7 CPs harvested 8,875 mt of yellowfin sole in the BSAI TLAS fishery, which is 55% of the BSAI TLAS allocation. In 2016, five CPs harvested 7,697 mt of yellowfin sole in the BSAI TLAS fishery, which is 51% of the BSAI TLAS allocation. Looking at 2017 since April 17, three CPs have harvested 4,787 mt of BSAI TLAS yellowfin sole, which is 49% of the fishery.

Weekly catch of BSAI TLAS yellowfin sole for the CPs from 2008 through 2016 has also changed. During the first three years of the BSAI TLAS yellowfin sole fishery, CPs fished from January 20 through February and in some cases through the months March and April, with a peak harvest generally in week 13. The remainder of the year, nearly all the CPs did not participate in the BSAI TLAS yellowfin sole fishery. Starting in 2011, the character of the fishery changed from a single two-month fishery at the start of the new fishing year for all participating CPs to two distinct fishing patterns. Looking at the first

pattern, fishing in the BSAI TLAS yellowfin sole fishery by CP vessels is compressed to generally two weeks starting on January 20 with a peak harvest during week 4. Under the second pattern, fishing in the BSAI TLAS yellowfin sole CP fishery stretches all year, has no identifiable peak harvest week, and generally is composed of only two CP vessels. Of the two CP fishing patterns in the BSAI TLAS yellowfin sole fishery, the CP vessels fishing all year, in general, harvested a larger share of the total CP harvest of BSAI TLAS yellowfin sole. Of these two CPs, one focuses primarily on the BSAI TLAS yellowfin sole fishery, while the other CP splits its time between the AI Pacific cod fishery and the BSAI TLAS yellowfin sole fishery. However, with the implementation of Amendment 113 to the FMP for the BSAI groundfish on November 23, 2016, which sets aside a portion of the AI Pacific cod total allowable catch for harvest by vessels directed fishing and deliver of their catch to shoreside processor located in the AI for processing, that CP could be displaced from the AI Pacific cod fishery under certain conditions and therefore increase its time in the BSAI TLAS yellowfin sole fishery.

Given that participating AFA CPs focus primarily on the BS pollock fishery, Table 2-9 includes annual BS pollock ITAC as an indicator of participation in the BSAI TLAS yellowfin sole fishery. As seen in Table 2-9 and Figure 2-1, the number of participating AFA CPs in the BSAI TLAS yellowfin sole fishery has been as low as three vessels during years of high BS pollock ITAC and AFA CP vessel counts have been as high as 12 during years of low BS pollock ITAC, but for many years the vessel counts of AFA CPs does not appear to be inversely related to BS pollock ITAC. Thus, using BS pollock ITAC as measure of participation in the BSAI TLAS yellowfin sole fishery will likely provide mixed results.

In summary, under the status quo alternative, AFA CPs will likely continue to participate in the BSAI TLAS yellowfin sole fishery. Their participation levels in the BSAI TLAS yellowfin sole fishery will, in some degree, likely depend on the BSAI pollock ITAC levels. During periods of low BS pollock ITAC the CPs could have greater levels of participation in the BSAI TLAS yellowfin sole fishery, while participation in the BSAI TLAS yellowfin sole fishery could diminish during periods of high BS pollock ITAC.

**Table 2-8 Years catcher processors participated in the BSAI yellowfin sole fishery (2003-2007) and the BSAI TLAS yellowfin sole fishery (2008 through April 17, 2017)**

Catcher processor	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total of years active
Vessel 1	X					X										2
Vessel 2	X	X	X	X	X	X		X	X	X	X	X	X	X	X	13
Vessel 3	X	X	X	X	X	X	X	X	X	X	X	X	X	X		14
Vessel 4		X	X	X	X	X	X		X	X	X	X	X	X	X	12
Vessel 5		X	X	X	X	X	X	X								7
Vessel 6			X	X	X	X		X	X	X	X	X	X	X		11
Vessel 7				X	X	X	X	X	X	X		X				8
Vessel 8					X	X		X		X	X	X	X			7
Vessel 9					X	X	X	X	X	X	X	X				8
Vessel 10						X	X	X	X							4
Vessel 11						X	X		X	X	X	X	X	X	X	9
Vessel 12						X	X		X	X	X	X	X			7
Vessel 13								X		X		X				3
Annual total	3	4	5	6	8	12	8	9	9	10	8	10	7	5	3	

Source file: BSAI\_Yellowfin (4-17-17); Current as of April 17, 2017

**Table 2-9 Vessel count and catch for BSAI TLAS yellowfin sole fishery, 2003 through 2017**

Year	BS Pollock ITAC <sup>1</sup> (mt)	BSAI YFS ITAC <sup>1</sup> (mt)	BSAI TLA YFS allocation (mt)	Offshore activity							
				CPs		CVs		Mothership vessel count in the BSAI TLA YFS fishery	BSAI YFS target catch from 2003-2007 <sup>2</sup> & BSAI TLA YFS target catch from 2008-2015 (mt)		
				Vessel count	Harvest BSAI YFS from 2003-2007 <sup>2</sup> and BSAI TLA YFS from 2008-2017 (mt)	Total CV count (delivering to motherships)	AFA CV count			Harvest BSAI YFS from 2003-2007 <sup>2</sup> and BSAI TLA YFS from 2008-2017 (mt)	
2003	1,342,584	71,188	N/A	3	*	0	0	*	0	4,461	
2004	1,342,800	73,164		4	*	2	1	*	2	4,386	
2005	1,330,650	77,083		5	*	1	0	*	1	7,995	
2006	1,336,500	81,346		6	*	4	3	*	2	13,361	
2007	1,254,600	115,600		8	*	3	1	*	2	22,214	
2008^	900,000	200,925		12	*	3	0	*	2	20,017	
2009^	733,500	187,530		33,154	8	*	1	0	*	1	10,181
2010^	731,700	195,567		22,369	9	*	0	0	*	0	19,421
2011	1,126,800	175,028		32,153	9	*	2	0	*	1	25,485
2012	1,080,000	180,386		36,297	10	*	3	0	*	1	28,140
2013	1,122,300	176,814	34,868	8	*	3	0	*	1	34,606	
2014	1,140,300	164,312	29,707	10	*	3	0	*	1	27,720	
2015	1,179,000	133,057	16,165	7	8,875	6	2	7,202	5	16,073	
2016	1,206,000	127,592	14,979	5	7,716	9	4	7,011	6	14,708	
2017	1,210,500	137,522	18,151	3	4,787	8	3	4,958	7	9,745	

Source file: BSAI\_Yellowfin(4-17-17); Current as of April 17, 2017

<sup>A</sup>Denotes confidential data

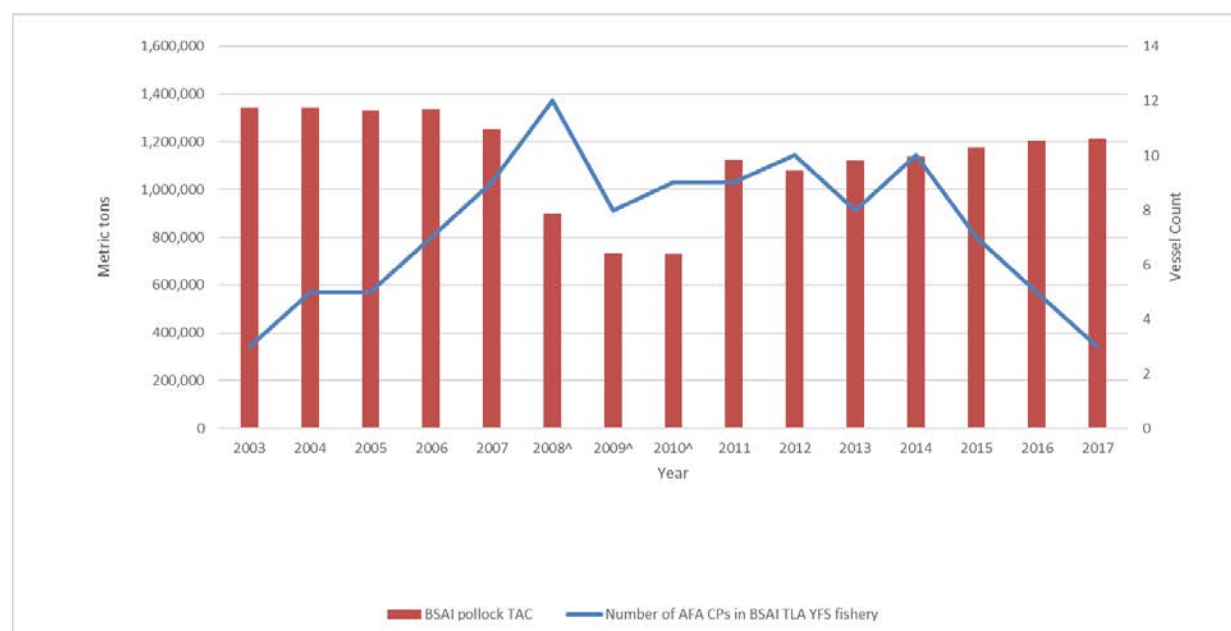
<sup>1</sup>ITAC = TAC - CDQ

<sup>2</sup>Catch of BSAI YFS target catch by AMB0 vessels has been removed from BSAI YFS target catch (2003-2007)

<sup>A</sup>BSAI TLA YFS allocation was adjusted to account for reapportionment of YFS from the BSAI TLA to Amendment 80 (see Table 4 for amounts reapportioned)

TLA = trawl limited access

YFS = yellow fin sole



**Figure 2-1 Vessel count of CPs participating in the BSAI TLAS yellowfin sole fishery and BSAI pollock TAC (mt) from 2003 through April 17, 2017**

As for trawl CV participation in the BSAI yellowfin sole fishery and BSAI TLAS yellowfin sole fishery, there were fewer CVs on an annual basis than the CPs, and they did not participate in the fishery as often as the CPs. Prior to 2008, the number of CVs ranged from one in 2005 to four in 2006. Since implementation of the BSAI TLAS yellowfin sole fishery in 2008, the number of CVs has ranged from a low of zero in 2010 to a high of nine in 2016. In total, there were 16 unique CVs that participated in the BSAI yellowfin sole fishery from 2003 through April 17, 2017. Of these 16 CVs, eight were AFA vessels. As noted in Table 2-10, 11 CVs participated in the BSAI TLAS yellowfin sole fishery (2008 – April 17, 2017) at least one year. Of these 11 CVs that participated in the yellowfin sole BSAI TLAS fishery, three vessels had six or more years in that fishery.

In recent years, the number of CVs participating in the BSAI TLAS yellowfin sole fishery has more than doubled. The increase in the number of CVs is due primarily to the increase in motherships entering the fishery likely seeking greater processing opportunities. In 2015, six CVs harvested 7,202 mt of yellowfin sole in the BSAI TLAS fishery, which is 45% of the BSAI TLAS yellowfin sole allocation, and is significantly higher than the sector's average annual percent of total BSAI TLAS yellowfin sole catch of 17% from 2008 through 2014. Of those six vessels, three were new entrants to the fishery. In 2016, nine CVs harvested 7,011 mt of yellowfin sole in the BSAI TLAS fishery, which was 48% of the BSAI TLAS yellowfin sole allocation. Of those nine CVs, one was a new entrant to the fishery and two vessels reentered the fishery, last participating in 2004 and 2008, respectively. Looking at the 2017 fishery through April 17, eight CVs harvested 4,958 mt of yellowfin sole, which is 51% of the fishery. Of those eight CVs, one was a new entrant to the fishery.

**Table 2-10 Years CVs delivering to motherships participated in the BSAI yellowfin sole fishery (2003-2007) and the BSAI TLAS yellowfin sole fishery (2008 – April 17, 2017)**

Catcher vessel	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total of years active
Vessel 1		X	X	X	X	X								X	X	6
Vessel 2						X										1
Vessel 3						X	X		X	X	X	X	X	X	X	8
Vessel 4										X	X	X	X	X	X	5
Vessel 5									X	X	X	X	X	X	X	6
Vessel 6													X	X	X	2
Vessel 7													X	X	X	2
Vessel 8													X	X	X	2
Vessel 9														X		1
Vessel 10		X												X		2
Vessel 11					X											1
Vessel 12					X											1
Vessel 13					X											1
Vessel 14															X	1
Vessel 15															X	1
Vessel 16															X	1
Annual total	0	2	1	4	3	3	1	0	2	3	3	3	6	9	8	

Source file: BSAI\_Yellow fin (4-17-17); Current as of April 17, 2017

In February 2017, the Council requested tables showing target fisheries for CVs that have historical participation in the BSAI yellowfin sole fishery from 2003 through 2017. To that end, Table 2-11 and Table 2-12 provide participation in the primary target fisheries in the BSAI and GOA from 2003 through April 11, 2017 for CVs that have historically targeted BSAI yellowfin sole. The targets are indicated as a letter or a group of letters for multiple targets in each cell of the tables arranged in order of greatest to

smallest target (see footnote following each of the tables). The absence of a letter indicates the CV did not have any groundfish targets in that FMP area that year.

Looking first at the BSAI (see Table 2-11), prior to 2008, CVs with history in the BSAI yellowfin sole fishery tended to focus their fishing effort on pollock and Pacific cod. Starting in 2008 and continuing through 2014, most CVs with BSAI yellowfin sole TLAS history continued to focus their fishing effort on pollock and Pacific cod, but a few CVs expanded their fishing effort to include targets in BSAI TLAS Atka mackerel, and AI TLAS Pacific ocean perch. In 2015 and continuing through April 11, 2017, the number of CVs with targets in BSAI TLAS Atka mackerel, and AI TLAS Pacific ocean perch expanded to include the new entrants. Other BSAI fisheries targeted by many of these same CVs include maximum retainable allowance (MRA) fisheries rock sole, flathead sole, arrowtooth flounder, Kamchatka flounder, and Alaska plaice.<sup>3</sup>

In the GOA (see Table 2-12), CVs with history in the BSAI yellowfin sole fishery were fewer. Most of these CVs tended to focus their fishing effort on pollock, but three CVs also targeted other fisheries, which included rockfish, Pacific cod, shallow-water flatfish, and arrowtooth flounder.

**Table 2-11 BSAI target fisheries for CVs that participated in the BSAI yellowfin sole fishery (2003-2007) and the BSAI TLAS yellowfin sole fishery (2008-2017)**

Catcher vessel	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Vessel 1		yc	yc	yr	yc	cy		cpa	ca				ca	cy	yc
Vessel 2				c	c	cy	c	c	c	c	c	c		c	c
Vessel 3					rakc	ycakr	ackyr	ack	ayckm	ycakpr	ycarp	ycakrp	ycak	yacrl	cay
Vessel 4										yackr	ycarpe	ycakr	ycakrp	ayckr	cyar
Vessel 5						c	ck	ck	ycakr	ycael	kcyaw	ckya	cyakr	ycrka	ycp
Vessel 6	p	pc	pc	pc	pc	pc	pc	pc	pc	pc	pc	pc	cpy	pycr	pycr
Vessel 7													ykra	yackr	yacr
Vessel 8	pc	pc	pc	pc	pc	pc	c	pc	c	cp	c	c	pyc	pcry	pcyl
Vessel 9	pc	pc	pc	pc	pc	pc	p	pc	p	pc	pc	cp	pc	cpyr	pc
Vessel 10	pc	pcy	pc	pc	pc	cp	c	pc	cp	c	c	c	c	cpyr	pc
Vessel 11	pc	pc	p	py	p	p	p	p	p	p	p	p	p	p	p
Vessel 12	p	p	p	py	p	p	p	p	p	p	p	p	p	p	p
Vessel 13	c	c	c	cy	c	c	c	c							
Vessel 14	c				y				c	c					c
Vessel 15	pc	pc	p	p	py	p	p	p	p	p	p	p	pc	p	
Vessel 16	pc	pc	pc	pc	pc	pc	pc	p	pc	pc	pc	pc	pc	pc	pcy

Source file: YSOL\_TGTs(4-11); current as of April 11, 2017

y=yellow fin sole

c = Pacific cod target

a = Atka mackerel

k = Pacific ocean perch

r = rocksole

p = pollock

w = arrow tooth flounder

l = flathead sole

m = Kamchatka

e = Alaska plaice

<sup>3</sup> Included in Table 2-11 are a few MRA species like BS pollock, BSAI rock sole and BSAI flathead sole. These MRA species are often labeled as a target if the amount of BSAI TLAS yellowfin sole in the haul is less than 70%, while BSAI MRA rock sole or flathead sole are the next largest percentage of species in the haul.

**Table 2-12 GOA target fisheries for CVs that participated in the BSAI yellowfin sole fishery (2003-2007) and the BSAI TLAS yellowfin sole fishery (2008-2017)**

Catcher vessel	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Vessel 1	cw	kpc	hckow	pkwhcl	hpc	hwcpob	pcwh		pc	pkcwh	pcks	pkcbh	pks	ckp	
Vessel 3						k									
Vessel 5						wpc									
Vessel 8	p						p	p	p	p	p	p			
Vessel 10	p					p					p	p	p	p	p
Vessel 13	p	p	p	p	p	p	p	p			p				
Vessel 14	hpck	pkchw	pkwc	phkc	hpck	hpck	hwpck	pchwlk	pcwhk	pckhl	pckh	pck	pcbk	ckwcpks	pc
Vessel 15	kcp	pkch	pwkc	pwkhc	pkhc	hcwkpl	hpcksw	pcwks	pckh	pcks	p	pkh	p	p	p

Source file: YSOL\_TGTS(4-11); current as of April 11, 2017

c = Pacific cod target

p = Pollock target

w = arrow tooth flounder

h = shallow -water flatfish

k = rockfish

s = sablefish

l = flathead sole

o = other species

Harvest patterns for CVs in the BSAI TLAS yellowfin sole fishery have changed over time. During the 2008 fishing season, the CVs participated in the BSAI TLAS yellowfin sole fishery from March until December. During the next two years, the CVs participated in the BSAI TLAS yellowfin sole fishery in April and in September and October. Starting in 2012, CVs generally participated in the BSAI TLAS yellowfin sole fishery throughout the entire year until the fishery closed to directed fishing.

The BSAI TLAS yellowfin sole fishery and the BSAI Pacific cod fishery have two different fishing periods. As noted above, since 2012, CVs generally participate in the BSAI TLAS yellowfin sole fishery throughout the entire year, while CVs in the BSAI Pacific cod fishery tend to focus their fishing effort during the first three or four months of the year. There is some overlap in fishing effort by the CVs in both fisheries.

Another group of vessels that participate in the offshore yellowfin sole fishery include CPs acting as motherships and floating processors. These vessels take deliveries of harvested BSAI yellowfin sole from trawl CV at-sea for processing. Participation in the BSAI yellowfin sole fishery and the BSAI TLAS yellowfin sole fishery by this group of vessels can be characterized as limited (see Table 2-13). Prior to implementation of the BSAI TLAS yellowfin sole fishery in 2008, only three motherships participated in the fishery, of which two were floating processors. After implementation of the BSAI TLAS yellowfin sole fishery in 2008, the number of participating vessels ranged from zero in 2010 to seven in 2016 and 2017. In general, though, only one mothership, an Amendment 80 CP, participated in the fishery prior to 2015. Starting in 2015, the number of participating motherships expanded to include four new entrants for a total five motherships. These new mothership entrants are Amendment 80 CPs. In 2016, in addition to the existing motherships that participated in 2015, there were two new mothership entrants, an AFA CP and an Amendment 80 CP, for a total of seven motherships. For 2017 so far, there have been a total of seven motherships participating in the fishery, one of which was a new mothership entrant from the Amendment 80 sector. This expansion in the number of motherships in the BSAI TLAS yellowfin sole fishery provided increased opportunities for CV deliveries, which is reflective in the increased number of CVs that participated in 2015, 2016, and 2017 (see Table 2-10) and the higher proportion of BSAI TLAS yellowfin sole harvested by the CV sector in 2015, 2016, and 2017 relative to previous years.

Table 2-14 provides annual processing activity in BSAI targets from 2003 through April 11, 2017 for motherships that have processing history in the BSAI TLAS yellowfin sole fishery. The targets are indicated as a letter or a group of letters for multiple targets in each cell of the tables arranged in order of

greatest to smallest target. The absence of a letter indicates the mothership did not have any processing in targets in the BSAI for that year.

Prior to 2015, one mothership processed in numerous BSAI target fisheries. These target fisheries included BSAI TLAS Atka mackerel, BSAI Pacific cod, and AI TLAS Pacific ocean perch and processed MRA fisheries like BS pollock, BSAI rock sole, and BSAI flathead sole. All other motherships limited their processing activity to mostly Pacific cod. With the addition of new mothership entrants in the BSAI TLAS yellowfin sole fishery starting in 2015, some these new mothership entrants also processed other targets like AI TLAS Pacific ocean perch, and BSAI TLAS Atka mackerel, as well as MRA species like BSAI rock sole, BSAI flathead sole, and BS pollock.

A potential reason for the recent expansion in mothership activity in the BSAI TLAS yellowfin sole fishery could be, in part, due to increased production efficiencies from processing both BSAI TLAS yellowfin sole and Amendment 80 yellowfin sole at the same time. Weekly production data shows that all five motherships that processed BSAI TLAS yellowfin sole deliveries also harvested and processed Amendment 80 yellowfin sole allocation in 2015. By processing both BSAI TLAS yellowfin sole deliveries and Amendment 80 harvested BSAI yellowfin sole at that same time likely results in a lower marginal cost of production for each unit of yellowfin sole. Specifically, the gains in production efficiency result from better utilization of the processing factory, which then results in more throughput of yellowfin sole in a 24-hour period. This is an important element in a low value, high abundance fishery like yellowfin sole. The gains in production efficiency and throughput likely contribute to higher net revenue, which is crucial for motherships to stay profitable.

Another potential reason for the expansion in mothership activity in the BSAI TLAS yellowfin sole fishery is that these motherships enjoy the benefit of rationalization to pursue additionally revenue opportunities in few remaining open access fisheries in the BSAI, which includes the BSAI TLAS yellowfin sole fishery. Rationalization has provided benefits to motherships participating in the BSAI TLAS yellowfin sole fishery, affording opportunities for consolidation, thus freeing some processing capacity to target and process non-rationalized BSAI groundfish fisheries like the BSAI TLAS yellowfin sole. Other groundfish targets that are processed by these motherships include Pacific cod, Atka mackerel, Pacific ocean perch, and MRA species like rock sole, flathead sole, and pollock. Given the remaining revenue opportunities for motherships is generally limited to these few fisheries, motherships that have the benefit of rationalization, will likely pursue processing in the BSAI TLAS yellowfin sole fishery and other BSAI targets if they perceived potential economic profits.

Recognizing the production efficiencies gains of processing CV deliveries of BSAI TLAS yellowfin sole and utilizing rationalization benefits to pursue additional revenue opportunities as a mothership are likely the primary reasons for the recent expansion in mothership activity in the BSAI TLAS yellowfin fishery, that same reasoning can also explain why there is likely some potential for additional motherships to enter the fishery and by extension more CVs to enter the fishery. Many of the smaller Amendment 80 vessels are likely at full processing capacity with their Amendment 80 allocations and likely have little incentive to expand their production to include unsorted CV catch from the BSAI TLAS yellowfin sole fishery. However, there is the potential for new more highly efficient, higher capacity Amendment 80 replacement vessels to enter the BSAI TLAS yellowfin sole fishery in the future. Currently there are two Amendment 80 replacement vessels under construction. In addition, there are five latent Amendment 80 licenses that could be assigned to new Amendment 80 replacement vessels in the future. All combined, there could be a potential of seven new Amendment 80 vessels that could enter the BSAI TLAS yellowfin sole fishery as a mothership, which could provide harvest opportunities for more CVs to enter the fishery. Utilizing Table 2-10 and Table 2-13, each mothership generally supported one to three CVs in the BSAI TLAS yellowfin sole fishery. If all seven of the replacement Amendment 80 vessels enter the BSAI TLAS



yellowfin sole fishery as motherships, seven to 21 more CV vessels could enter the fishery. These estimates of new mothership and CV entrants into the BSAI TLAS yellowfin sole likely represent the maximum potential given the limited economic opportunities in the fishery. Limited allocation size and first wholesale value, and the requirement to find and maintain buyers for harvesters and processors are all factors that limit the potential opportunity for new entrants in this fishery. In all likelihood, mothership and CV participation in the BSAI TLAS yellowfin sole fishery under status quo will likely continue at current levels, but with some potential that one or both of the Amendment 80 CPs currently under construction could enter the fishery in the future.

**Table 2-13 Years mothership vessels participated in the BSAI yellowfin sole fishery (2003-2007) and the BSAI TLAS yellowfin sole fishery (2008-2017)**

Mothership	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total of years active
Vessel 1		X														1
Vessel 2	X	X	X	X	X	X	X		X	X	X	X	X	X	X	13
Vessel 3				X	X	X										3
Vessel 4													X	X	X	2
Vessel 5													X	X	X	2
Vessel 6													X	X	X	2
Vessel 7													X	X	X	2
Vessel 8														X		1
Vessel 9														X	X	2
Vessel 10															X	1
Annual total	1	2	1	2	2	2	1	0	1	1	1	1	5	7	7	

Source file: BSAI\_Yellowfin (4-17-17); Current as of April 17, 2017

**Table 2-14 BSAI target fisheries for motherships that participated in the BSAI yellowfin sole fishery (2003-2007) and the BSAI TLAS yellowfin sole fishery (2008 – April 11, 2017)**

Mothership	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Vessel 1		y													
Vessel 2	y	yc	yrw	yr	raykc	ycakr	acykr	acr	ayckm	yackrpel	yckarpew	ycakrp	ycakrp	yrckal	cyar
Vessel 3				y	y	y									
Vessel 4						c							ycar	cykar	yac
Vessel 5								k	c	c	c		yakr	yacr	ycr
Vessel 6													y	yrcp	ycr
Vessel 7													y	rywc	cyrl
Vessel 8	c	c	c	c	c	c	c	cp	c	c		dr	c	cypr	c
Vessel 9														ayk	yep
Vessel 10														ac	cy
Annual total	1	2	1	2	2	2	1	0	1	1	1	1	5	7	7

Source file: MSHIP\_TGT(4-11-17)-2; Current as of April 11, 2017

y=yellow fin sole

c = Pacific cod target

a = Alaska mackerel

k = Pacific ocean perch

r = rock sole

p = pollock

w = arrowtooth flounder

l = flathead sole

m = Kamchatka

e = Alaska plaice

### 2.7.1.2 Halibut PSC mortality in BSAI TLAS yellowfin sole fishery

As with other BSAI groundfish fisheries, the halibut PSC limit has the potential to close the BSAI TLAS yellowfin sole fishery to directed fishing, or move fishing activity out of a preferred fishing area. NMFS

monitors halibut PSC limits in this fishery, and may close or otherwise restrict trawl harvests in this fishery if PSC limits are projected to be reached. Fishery closures due to reaching halibut PSC limits can limit harvest of the yellowfin sole ITAC and reduce overall revenue to vessel operators and crew. As vessel operators seek to maximize harvest of yellowfin sole ITAC, they may accelerate fishing operations to maximize harvest of yellowfin sole ITAC before the halibut PSC limit is reached.

Table 2-15 provides fishery closure dates for the BSAI yellowfin sole fishery (for both Amendment 80 and BSAI TLAS from 2008 through April 17, 2017) and fishery closure dates for the yellowfin sole trawl fishery (from 2003 through 2007). As noted in the table, the yellowfin sole BSAI TLAS fishery has remained open most of the year, closing in November or December. The only exceptions are in 2014 and 2016. In 2014, the fishery closed on May 15 to prevent exceeding the halibut PSC limit apportioned to the fishery. On June 18, 2014, 60 mt of halibut PSC was reapportionment from the BSAI TLAS Pacific cod and pollock fisheries to the BSAI TLAS yellowfin sole fishery, which allowed the BSAI TLAS yellowfin sole fishery to open on June 20, and remain open for the rest of 2014. In 2016, the BSAI TLAS yellowfin sole fishery closed on June 8 because the fleet harvested the BSAI TLAS yellowfin sole TAC. In 2017, the fishery was open for directed fishing as of April 17, 2017.

**Table 2-15 Status of the BSAI yellowfin sole fishery from 2003 through April 17, 2017**

Year	Action	Purpose	Date	BSAI TLA			Amendment 80		
				Action	Purpose	Date	Action	Purpose	Date
2003	Closed-trawl	Halibut	16-Apr						
	Open-trawl	Sufficient halibut	29-Apr						
	Closed-trawl bycatch limitation zone 1	Red king crab	21-May						
	Closed-trawl	Halibut	3-Jun						
	Closed-trawl	Halibut	24-Sep						
	Reapportionment from reserve	3,500 mt	24-Dec						
2004	Closed	TAC	2-Jun						
2005	Closed-trawl bycatch limitation zone 1	Red king crab	14-Mar						
	Closed	TAC	17-May						
	Opened	Sufficient TAC	21-Jul						
	Reapportionment from reserve	6,800 mt	25-Jul						
	Closed-trawl	Halibut	17-Aug						
	Prohibit retention	TAC	22-Aug						
	Rescinds prohibition retention	Sufficient TAC	16-Sep						
	Apportionment from reserve	3,500 mt	16-Sep						
2006	Apportionment from reserve	401 mt	30-Dec						
	Closed-trawl	Halibut	19-Apr						
	Closed-trawl	Halibut	7-Jun						
	Prohibit retention	TAC	15-Jun						
	Opened	Sufficient TAC	12-Jul						
	Apportionment from reserve	7,500 mt	24-Jul						
2007	Closed	TAC	7-Aug						
	Closed-trawl	Halibut	18-Apr						
	Closed-trawl	Halibut	7-Jun						
2008	Closed-trawl	Halibut	3-Aug						
				No TAC or halibut closures for Yellowfin Sole			Closed AM80 LAF	Halibut	16-May
							Used AM80 LAF bycatch limitation zone	Red king crab	21-May
2009							Reallocation from TLA to AM80	6,000 mt	20-Oct
2010							Closed AM80 LAF	Halibut	20-Nov
2011									
2012									
2013									
2014									
2015									
2016									
2017									

Source: NMFS Final Specifications  
TLA = trawl limited access  
LAF = AM80 limited access fishery

As seen in Table 2-16, there is a direct relationship between halibut mortality in the BSAI TLAS yellowfin sole fishery and the harvest of BSAI TLAS yellowfin sole. As the harvest of BSAI TLAS yellowfin sole increases, so does halibut mortality. For example, in 2013, harvest of BSAI TLAS yellowfin sole fishery was the highest since 2008 at over 34,600 mt and the associated halibut mortality in that fishery was 185 mt, which was the second highest amount of halibut mortality from 2008 through 2016. During that year, halibut mortality in the BSAI TLAS yellowfin sole fishery exceeded the halibut PSC limit by 18 mt. In 2014, over 27,000 mt of BSAI TLAS yellowfin sole was harvested with a halibut mortality of 194 mt. During that year, 60 mt of halibut PSC limit was reapportioned from the BSAI TLAS Pacific cod fishery to the BSAI TLAS yellowfin sole fishery, which allowed NMFS to reopen the BSAI TLAS yellowfin sole fishery.

In contrast to those years of high BSAI TLAS yellowfin sole harvest and halibut mortality, 2009 saw only 95 mt of halibut mortality for 10,181 mt of BSAI TLAS yellowfin sole harvested. In another example, 2015 saw 122 mt of halibut mortality for a harvest of over 16,000 mt of BSAI TLAS yellowfin sole. In both examples, a large percentage of the halibut PSC limit remained in the water. One year, 2010, stands out as an unusual year with only 27 mt of halibut mortality for 19,421 mt of BSAI TLAS yellowfin sole harvested. It is possible that the low halibut mortality in 2010 was the result of reduced halibut on the yellowfin sole fishing grounds in January and February and the fishery lasted only 8 weeks immediately following the January 20 opening date. Finally, halibut mortality in 2016 was 124 mt, leaving 26 mt of the halibut PSC limit in the water.

Table 2-16 and Figure 2-2 provide the annual halibut rate for the BSAI TLAS yellowfin sole fishery (kilogram of halibut mortality in the BSAI TLAS yellowfin sole fishery divided by catch of groundfish in the BSAI TLAS yellowfin sole fishery) from 2008 through April 18, 2017. The table and figure also provide annual halibut rates for the Amendment 80 yellowfin sole fishery, and the Pacific cod, rock sole, and flathead sole fisheries in the BSAI. As noted in the table and figure, with the exception of the 2017 fishery thus far, the annual halibut rate has increased slightly every year since 2010. During 2010, the halibut rate for the BSAI TLAS yellowfin sole fishery was 1.11, while in 2016 the halibut rate was 6.29. Halibut rates for other groundfish fisheries in the BSAI in most cases were similar in scope to the BSAI TLAS yellowfin sole fishery. Some groundfish fisheries with high halibut rates were rock sole between 2008 through 2010 and flathead sole between 2008 through 2013.

**Table 2-16 Halibut PSC limit, halibut mortality, and halibut mortality rate for the BSAI TLAS yellowfin sole fishery and other BSAI groundfish fisheries from 2008 through April 18, 2017**

Year	BSAI TLA yellowfin sole					Other halibut PSC rates** in BSAI groundfish fisheries			
	Target catch (mt)	Halibut PSC limit (mt)	Total halibut mortality (mt)	Unused halibut PSC limit (mt)	Halibut rate**	AM80 yellowfin sole	Pacific cod	Rock sole	Flathead sole
2008	20,017	241	158	83	5.82	5.70	7.75	10.18	8.31
2009	10,181	162	95	67	6.55	7.05	10.60	11.56	9.30
2010	19,421	187	27	160	1.11	6.64	4.62	12.52	8.12
2011	25,485	167	81	86	2.33	4.90	2.83	6.76	9.02
2012	28,140	167	142	25	3.57	5.16	10.41	4.67	13.95
2013	34,606	167	185	-18	3.61	5.63	5.76	8.09	8.79
2014*	27,720	227	194	33	4.81	6.64	5.98	9.01	5.61
2015	16,073	167	122	45	4.98	4.49	5.78	7.66	3.67
2016	14,708	150	124	26	6.29	3.59	3.75	6.25	4.51
2017	9,745	150	76	74	2.97	2.49	3.97	2.41	4.14

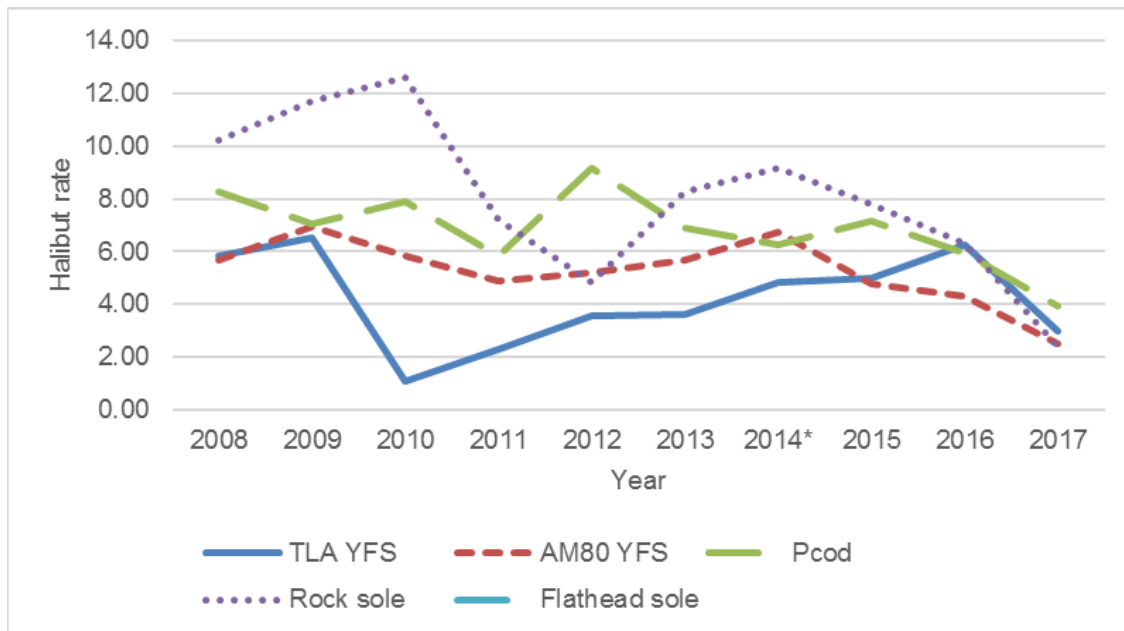
Source file: BSAI\_Yellowfin(4-17-17) and BSAI\_PSC(4-18-17); Current as of April 18, 2017

\*60 mt of halibut PSC was transferred to the BSAI TLA YFS fishery from BSAI TLA Pacific cod fishery

\*\*Halibut rate = kg halibut mortality in the BSAI TLA YFS fishery/mt groundfish in the BSAI TLA YFS fishery

TLA = trawl limited access

YFS = yellow fin sole



**Figure 2-2 Annual halibut mortality rate in the BSAI TLAS yellowfin sole fishery relative to other BSAI groundfish fisheries from 2008 through April 18, 2017**

Table 2-17 provides information on average monthly halibut mortality rate from 2008 through April 20, 2017. In general, the months with the highest halibut mortality is June, July, November, and December. During those months, halibut mortality rates in the BSAI TLAS yellowfin sole fishery range from a low of 7.85 kg of halibut per mt of groundfish to 12.46 kg of halibut per mt of groundfish. The months with

the lowest mortality rates are January, May, September, and October, which ranges from 2.45 kg of halibut per mt of groundfish to 3.43 kg of halibut per mt of groundfish.

**Table 2-17 Average monthly halibut mortality rate**

Month	2008 - April 20, 2017
January	2.45
February	4.21
March	4.01
April	4.37
May	2.62
June	7.85
July	*
August	5.05
September	3.43
October	3.31
November	12.46
December	*
<b>Average</b>	<b>4.00</b>

Source: TLAS\_PSC\_RATES\_MNTH(4-20-17); Current as of April 20, 2017

\*Denotes confidential data

Table 2-18 disaggregates halibut mortality in the BSAI TLAS yellowfin sole fishery by vessel operation. Except for 2015, 2016 and 2017, annual halibut mortality by sector is confidential and could not be provided due to the limited number of motherships participating in the fishery on an annual basis. Halibut mortality for the 2017 BSAI TLAS yellowfin sole fishery was as of April 17, and the fishery was still open for directed fishing. For the three years halibut mortality could be shown, the CP sector caught 54 mt in 2015, 47 mt in 2016, and 13 mt for 2017, which was 44%, 38%, and 17% of the halibut PSC limit for the BSAI TLAS yellowfin sole fishery. The CV sector caught 68 mt in 2015, 77 mt in 2016, and 63 mt in 2017, which was 56%, 62%, and 83% of the total halibut mortality in the BSAI TLAS yellowfin sole fishery.

Halibut mortality rates between the two groups varied somewhat during the 2015 to 2017 period. The CP sector's halibut mortality rate was 4.25 in 2015, 4.70 in 2016, and 1.33 for 2017, while the CV sector's halibut mortality rate was 6.56 for 2015, 8.18 in 2016, and 4.03 in 2017. Overall, the CP sector's average halibut mortality rate from 2003 through 2017 was 3%, while the average halibut mortality rate for CV sector was 4.25%. Looking only at the years 2015 through 2017, average halibut mortality for the CP sector was 3.42, while the CV sector was 5.98. When comparing halibut mortality amongst new and historic CVs, rates vary across groups with one group having the highest mortality one year while the other group of CVs having the highest mortality the next year. In general, the CP sector has a slightly lower halibut mortality rate when compared to CV sector, which is likely a factor of the timing of the CP fishery. Most CPs tend to focus their fishing effort immediately following the January 20 opener which likely has less halibut on the yellowfin sole grounds, while CVs tend to fish throughout the entire BSAI TLAS yellowfin sole season when halibut are most often on the yellowfin sole grounds.

**Table 2-18 Halibut mortality by vessel operator in the BSAI TLAS yellowfin sole fishery, 2003 through April 17, 2017**

Year	YFS trawl (mt)	BSAI TLA YFS halibut PSC limit (mt)	CPs			CVs			Total halibut mortality (mt)
			Halibut mortality (mt)	% of total halibut mortality	Halibut mortality rate***	Halibut mortality (mt)	% of total halibut mortality	Halibut mortality rate***	
2003	886	NA	*	*	*	*	*	*	2
2004	886		*	*	*	*	*	*	4
2005	886		*	*	*	*	*	*	16
2006	886		*	*	*	*	*	*	92
2007	886		*	*	*	*	*	*	56
2008		241	*	*	*	*	*	*	158
2009		162	*	*	*	*	*	*	95
2010		187	*	*	*	*	*	*	27
2011		167	*	*	*	*	*	*	81
2012	NA	167	*	*	*	*	*	*	142
2013		167	*	*	*	*	*	*	185
2014**		227	*	*	*	*	*	*	194
2015		167	55	44	4.25	68	55	6.56	123
2016		150	48	38	4.70	77	61	8.18	127
2017		150	13	17	1.33	63	83	4.03	76

Source file: BSAI\_Yellow fin(4-17-17) and NMFS Final Specifications; Current as of April 17, 2017

\*Confidential data

\*\*60 mt of halibut PSC was transferred to the BSAI TLA YFS fishery from BSAI TLA Pacific cod fishery

\*\*\*Halibut rate = kg halibut mortality in the BSAI TLA YFS fishery/mt groundfish in the BSAI TLA YFS fishery

TLA = trawl limited access

YFS = yellow fin sole

As noted in the December 2015 public testimony on this issue, an approach used by some companies participating in the BSAI TLAS yellowfin sole fishery to help reduce halibut mortality in the fishery was the development of a best practices agreement. Since 2012, a few AFA companies and one Amendment 80 company have an agreement to help reduce halibut mortality in the BSAI TLAS yellowfin sole fishery. Elements of the agreement have included suggested target rates of halibut mortality, reporting real-time halibut mortality and location of the mortality, and established procedures for sharing of halibut mortality information via Sea-State. In some years, the agreement has also included informal apportionment of remaining halibut mortality among participating vessels, which fish late in the year.

Overall, under status quo, halibut PSC usage in the BSAI TLAS yellowfin sole fishery will likely continue at similar levels. In those years where the 150 mt halibut PSC limit for the BSAI TLAS yellowfin sole fishery is reached prior to harvesting all the yellowfin sole TLAS allocation, some of that BSAI TLAS yellowfin sole allocation could remain unharvested by the TLAS vessels, which NMFS later in the year could rollover to the Amendment 80 sector.

## 2.7.2 Analysis of Impacts: Alternative 2

### 2.7.2.1 Option 1.1 and Option 1.2

Under this alternative, CVs harvesting BSAI TLAS yellowfin sole and delivering to offshore processors would be restricted to those CVs that participated in the target fishery between 2008 through 2016. There are two options that vary only in the qualifying years used to limit access. Specifically, under Option 1.1, a CV may target BSAI TLAS yellowfin sole for deliver to a mothership or CP if that CV is assigned an LLP with a BS or BSAI area endorsement that is credited with at least one landing in the target BSAI

TLAS yellowfin sole fishery that was delivered to a mothership or CP between 2008 - 2015 in any one year or in any two years. Under Option 1.2, the qualifying years would be 2008 – 2016.

Table 2-19 shows the total number of trawl CVs that participated in different BSAI groundfish fisheries from 2008 through April 19, 2017. In total, there were 125 trawl CVs that participated in BSAI groundfish fisheries. Of those 125 CVs, 99 CVs targeted BSAI pollock, 90 CVs targeted Pacific cod, 13 CVs targeted BSAI yellowfin sole, and 14 CVs targeted other groundfish.

**Table 2-19 Number of trawl CVs targeting BSAI groundfish from 2008 through April 19, 2017**

Number of trawl CVs	BSAI target fisheries from 2008 through April 19, 2017				
	Total	Pollock	Pacific cod	Yellowfin sole	Other groundfish
	125	99	90	13	14

Source file: BSAI\_TGTS(4-19); Current as of April 19, 2017

Looking first at Option 1.1, Table 2-20 shows the number of CVs targeting BSAI TLAS yellowfin sole from 2008 through 2015, and the number of qualified CVs under Suboption 1.1.1 and Suboption 1.1.2. As noted in the table, there were a total of eight CVs owned by five companies that targeted BSAI TLAS yellowfin sole from 2008 through 2015. Under Suboption 1.1.1, all eight of these CVs would qualify since they are credit with one targeted landing in the yellowfin sole TLAS to a mothership or CP in any one year from 2008 through 2015. Six of the qualifying CVs are non-AFA vessels, while the remaining two CVs are AFA vessels.

Narrowing the requirement to one targeted landing to a mothership or CP in the yellowfin sole TLAS fishery in any two years from 2008 through 2015 (Suboption 1.1.2), reduces the number of qualified CVs to three, all owned by one company and are non-AFA vessels. As noted in Table 2-19, three of the CVs that qualified under Suboption 1.1.1 but did not qualify under Suboption 1.1.2 had only one year (2015) of targeted BSAI TLAS yellowfin sole landings between 2008-2015. These three CVs did participate in the 2016 BSAI TLAS yellowfin sole fishery. Of the remaining two CVs that qualified under Suboption 1.1.1 but did not qualify under Suboption 1.1.2, both targeted BSAI TLAS yellowfin sole in the 2008, while one of the vessels reentering the fishery in 2016.

Of the CVs that qualify under Suboption 1.1.1 and Suboption 1.1.2, the portion of total gross revenue from BSAI TLAS yellowfin sole differed significantly between the qualifying vessels. Specifically, the three CVs that qualify under Suboption 1.1.2 had a much higher portion of their total gross revenue from the BSAI TLAS yellowfin sole fishery than the five CVs that did not qualify for Suboption 1.1.2. However, one of the five CVs that did not qualify under Suboption 1.1.2 had a significant portion of their total gross revenue come from the BSAI TLAS yellowfin sole fishery.

As noted in Table 2-11 and Table 2-12, all qualifying CVs in Option 1.1 (vessel 1 through vessel 8) also participated in other fisheries in addition to the BSAI TLAS yellowfin sole fishery. Other fisheries included BSAI Pacific cod, BSAI pollock, BSAI TLAS Atka mackerel and AI TLAS Pacific Ocean perch, BSAI MRA rock sole, GOA pollock, GOA Pacific cod, and other GOA groundfish fisheries. The three CVs that qualify for Suboption 1.1.2 had a significant portion of their total gross revenue from BSAI Pacific cod and other BSAI groundfish fisheries which included TLAS Atka mackerel and TLAS Pacific Ocean perch, while the total gross revenue for the five additional CVs that qualify under Suboption 1.1.1 varied. One CV had revenue from BSAI TLAS Atka mackerel, BSAI Pacific cod, and BSAI MRA rock sole. Another two CVs had a significant portion of their total gross revenue from BS pollock and BS Pacific cod, while the remaining two CVs had total gross revenue mostly from the BSAI Pacific cod fishery.

**Table 2-20 Number of CVs targeting BSAI TLAS yellowfin sole from 2008 through 2015 that qualify under Suboption 1.1.1 and Suboption 1.1.2**

CVs targeting BSAI TLA YFS									Qualified CVs	
	2008	2009	2010	2011	2012	2013	2014	2015	Suboption 1.1.1 (any one year from 2008-2015)	Suboption 1.1.2 (any two years from 2008-2015)
Vessel 1	X								X	
Vessel 2	X								X	
Vessel 3	X	X		X	X	X	X	X	X	X
Vessel 4					X	X	X	X	X	X
Vessel 5				X	X	X	X	X	X	X
Vessel 6								X	X	
Vessel 7								X	X	
Vessel 8								X	X	
<b>Total</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>8</b>	<b>3</b>

Source file: BSAI\_Yellow fin(7-15)-1

TLA = trawl limited access

YFS = yellow fin sole

Looking next at qualified CVs under Option 1.2, Table 2-21 shows that a total of 10 CVs owned by seven companies targeted BSAI TLAS yellowfin sole and delivered their harvest to an offshore processor at least one year from 2008 through 2016, and therefore would qualify under Suboption 1.2.1. The addition of 2016 for determination of eligibility resulted in two additional CVs relative to Suboption 1.1.1. Both of these CVs are AFA vessels. Overall, six of the qualified CVs under Suboption 1.2.1 are non-AFA vessels and four are AFA vessels. As noted in Table 2-11 and Table 2-12, from 2008 through 2016, all ten qualified CVs also targeted BSAI Pacific cod, BSAI pollock, BSAI TLAS Atka mackerel, TLAS AI Pacific ocean perch, BSAI MRA rock sole, and occasionally other BSAI MRA groundfish species. In the GOA, one CV targeted a mix of species to include Pacific cod, pollock, rock sole, sablefish, arrowtooth flounder and sablefish throughout 2008 through 2016; two CVs were only active in the GOA only in 2008; and the remaining two CVs targeted mostly pollock.

Under Suboption 1.2.2, which requires a CV to target BSAI TLAS yellowfin sole and deliver their harvest to an offshore processor for any two years from 2008-2016, seven CVs owned by four companies would qualify. Relative to Suboption 1.1.2, which only three CVs from one company qualified, the addition of 2016 for eligibility, resulted in the addition of four CVs eligible to participate in the BSAI TLAS yellowfin sole offshore limited access fishery. Two of the qualified CVs are AFA vessels, and the remaining five CVs are non-AFA vessels. Of the three CVs that qualified under Suboption 1.2.1 but did not qualify under 1.2.2, one CV targeted BSAI TLAS yellowfin sole in 2008 only, while the remaining two CVs targeted BSAI TLAS yellowfin sole in 2016 only.



**Table 2-21 Number of CVs targeting BSAI TLAS yellowfin sole from 2008 through 2016 that qualify under Suboption 1.2.1 and Suboption 1.2.2**

CVs targeting BSAI TLA YFS										Qualified CVs	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	Suboption 1.2.1 (any one year from 2008-2016)	Suboption 1.2.2 (any two years from 2008-2016)
Vessel 1	X								X	X	X
Vessel 2	X									X	
Vessel 3	X	X		X	X	X	X	X	X	X	X
Vessel 4					X	X	X	X	X	X	X
Vessel 5				X	X	X	X	X	X	X	X
Vessel 6								X	X	X	X
Vessel 7								X	X	X	X
Vessel 8								X	X	X	X
Vessel 9									X	X	
Vessel 10									X	X	
<b>Total</b>	<b>3</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>9</b>	<b>10</b>	<b>7</b>

Source file: BSAI\_Yellow fin(7-15)-1

TLA = trawl limited access

YFS = yellow fin sole

Comparing Table 2-10 and Table 2-21 shows that of the 15 total CVs that targeted BSAI yellowfin sole from 2003 through 2016, five of these CVs would not qualify for either suboption. All five of these CVs have not targeted BSAI yellowfin sole since 2007. Three of these five CVs are AFA vessels with a significant portion of their total gross revenue is from the BS pollock fishery with some additional revenue from BSAI Pacific cod and GOA groundfish fisheries. The portion of total gross revenue for these five CVs, aggregated, from the BSAI yellowfin sole fishery is less than one percent, but two CVs did have greater than one percent of their total gross revenue from the BSAI yellowfin sole fishery but less than 10%. Since these five CVs that do not qualify for the BSAI TLAS yellowfin sole offshore limited access fishery had either less than one percent of their total gross revenue from BSAI yellowfin sole fishery or had not participated in the BSAI TLAS yellowfin sole fishery since its inception in 2008, other than lost opportunity to fish in the fishery in the future, there is likely minimal financial impact to these CVs from the proposed action.

One of the potential benefits of Option 1.1 and Option 1.2 is it could allow eligible CVs and AFA CPs to develop a voluntary cooperative agreement in the BSAI TLAS yellowfin sole fishery, which could help lengthen the BSAI TLAS yellowfin sole fishery and reduce halibut PSC in the fishery. By limiting the total number of CVs that can target BSAI TLAS yellowfin sole for delivery to offshore processors, new CVs cannot entry the fishery, which makes cooperative management easier to achieve.

The benefit of a voluntary cooperative managed BSAI TLAS yellowfin sole fishery could be crucial to a fully utilized fishery. As noted in Table 2-16, the halibut PSC limit for all BSAI TLAS fisheries was reduced to 745 mt, of which 150 mt was reserved for the yellowfin sole fishery. This reduction in halibut PSC limits for the BSAI TLAS fisheries to include yellowfin sole combined with the Council's continued emphasis on reducing halibut PSC in the groundfish fisheries continues to put increased pressure on harvesters to better manage their halibut mortality to fully harvest the BSAI TLAS yellowfin sole fishery. To that end, voluntary cooperative management could go a long way as a tool for harvesters to fully utilize the BSAI TLAS yellowfin sole fishery during periods of high allocations with a fixed halibut PSC limit, like those experienced from 2008-2014.

One potential effect of a voluntary cooperative agreement between eligible CVs and participating CPs is that eligible CVs could use the increased flexibility of the agreement to shift effort to other target

fisheries. This spillover effect likely depends in large part on the number of CVs that would be eligible to participate in the BSAI TLAS yellowfin sole fishery. Other target fisheries that might be affected are BSAI Pacific cod, BSAI TLAS Atka mackerel, AI TLAS Pacific ocean perch, and GOA pollock. In addition, MRA fisheries like BS pollock, BSAI rock sole, and BSAI flathead sole could also be impacted by these spillover effects.

Although there is likely a greater potential for cooperative management of the BSAI TLAS yellowfin sole fishery under the proposed action relative to status quo, one factor that could hamper potential cooperative management are the CPs that have historically targeted the species. Linked to some degree directly to the pollock TAC, the CP sector has the capacity to harvest a significant portion of the BSAI TLAS yellowfin sole fishery. CP sideboard limits for BSAI yellowfin sole, when applied at an ITAC below 125,000 mt, are non-constraining. As noted in Table 2-8, as many as 12 CPs have targeted BSAI TLAS yellowfin sole since 2008. In 2015, the CP sector harvested almost 9,000 mt of BSAI TLAS yellowfin sole, which was 55% of the total TLAS allocation (see Table 2-9). Overall, the CP sector, on average, harvested 85% of the total BSAI TLAS yellowfin sole fishery from 2008 through 2016, and utilized, on average, 73% of the halibut PSC limit apportioned to the BSAI TLAS yellowfin sole fishery from 2008 through 2016. The CP sector historically targets BSAI TLAS yellowfin sole in a very narrow time window immediately following the opening of the fishery on January 20, but could lengthen if the pollock fishery is less economically appealing than the BSAI TLAS yellowfin sole fishery. The combination of CP harvest capacity, the strength of the BSAI pollock fishery, and the absence of catch limits for the CPs in the fishery could potential increase the difficulty of cooperative management amongst the eligible CVs and the CPs that historically target this species.

Although the proposed action alternative does not directly prohibit mothership activity in the BSAI TLAS yellowfin sole fishery, the proposed action does indirectly limit mothership opportunities in the fishery by reducing the number of eligible CVs that can harvest and deliver BSAI TLAS yellowfin sole to motherships. As noted in Table 2-13, nine motherships have participated in the BSAI yellowfin sole fishery from 2003 through 2016. Of those nine motherships, six received CV deliveries of targeted BSAI TLAS yellowfin sole catch during the 2008 through 2015 period, one mothership last participated in 2004, and the remaining two motherships were active in the fishery for the first time in 2016. Under Suboption 1.1.1, eight CVs would be eligible to delivery targeted BSAI TLAS yellowfin sole to a mothership, while under Suboption 1.1.2, only three CVs would be authorized to make deliveries to a mothership. Under Suboption 1.2.1, 10 CVs would be eligible to delivery targeted BSAI TLAS yellowfin sole to a mothership, and under Suboption 1.2.2, seven CVs would be eligible for deliveries to a mothership. In general, the lower the number of qualified CVs, the more the proposed action indirectly limits mothership opportunities in the BSAI TLAS yellowfin sole fishery.

The level of vertical integration present in the CV BSAI TLAS yellowfin sole fishery would also reduce mothership opportunities. Specifically, two companies that own five of the eight eligible CVs under Suboption 1.1.1 and one company that owns all three of the eligible CVs under Suboption 1.1.2, also own motherships that have participated in the BSAI TLAS yellowfin sole fishery. Companies that own both eligible CVs and participating motherships are likely at an economic advantage relatively to companies that do not own eligible CVs since these non-vertically integrated motherships must secure deliveries from a limited number of eligible CVs. In general, the lower the number of qualified CVs in the BSAI TLAS yellowfin sole fishery, the smaller the processing opportunity for non-vertically integrated motherships in the BSAI TLAS yellowfin sole fishery.

Selection of Suboption 1.1.2 could also reduce production efficiencies amongst BSAI TLAS yellowfin soles motherships that also operator as CPs in the Amendment 80 yellowfin sole fishery. As noted in Section 2.7.1.1, processing both BSAI TLAS yellowfin sole and Amendment 80 yellowfin sole at the

same time likely lowers the marginal cost of production for each unit of yellowfin sole. Without the addition of BSAI TLAS yellowfin sole deliveries, it is possible that some of these motherships could experience a higher marginal cost of production enough to affect their Amendment 80 yellowfin sole operation.

Depending on the suboption selected, there is some potential for spillover effects in the BSAI Pacific cod CV fishery due to ineligibility in the BSAI TLAS yellowfin sole fishery, even though most of the CVs that participate in the BSAI TLAS yellowfin sole fishery also participate in the BSAI Pacific cod fishery. The primary effect would likely be from increased effort in the BS Pacific cod CV fishery by ineligible CVs, which makes this already fully utilized fishery that much more competitive. In general, the greater the number of ineligible CVs and by extension motherships, likely the greater the spillover effect in the BSAI Pacific cod CV offshore fishery. Since some displaced CVs already deliver BSAI Pacific cod catch to shoreplants, those same displaced CVs would likely continue to follow the same delivery pattern from their increased effort in the BSAI Pacific cod fishery if displaced from the BSAI TLAS yellowfin sole fishery. Similarly, those CVs that currently deliver BSAI Pacific cod to offshore processors will likely continue that delivery pattern if displaced from the BSAI TLAS yellowfin sole fishery. Development of a threshold fishery (Option 2.1) or providing ineligible CVs access to a limited BSAI TLAS yellowfin sole amount (Option 2.2) would likely do little to reduce these spillover effects. The BSAI Pacific cod CV fishery has for many of the past several years has closed to fishing in the February and March (Table 2-22), while the BSAI TLAS yellowfin sole fishery tends to close much latter (see Table 2-15). This gives ample time for ineligible CVs to continue focusing their fishing effort in the BSAI Pacific cod fishery before shifting their effort to any threshold or limited BSAI TLAS yellowfin sole fishery if available.

**Table 2-22 Closure dates for BSAI Pacific cod A season trawl CV sector**

Year	Sector closure date for Pacific cod A season trawl CV
2003	Never closed
2004	23-Mar
2005	13-Mar
2006	8-Mar
2007	12-Mar
2008	6-Mar
2009	21-Mar
2010	12-Mar
2011	26-Mar
2012	27-Feb
2013	11-Mar
2014	Never closed
2015	Never closed
2016	9-Mar
2017	23-Feb

Source: NMFS

Finally, the Council during the February 2017 clarified that eligibility to participate in the offshore BSAI TLAS yellowfin sole fishery for CVs will be attached to the LLP license assigned to the vessel that made at least one trip target in the fishery. This would apply to CVs that have LLP licenses stacked on the qualifying vessel during the 2008-2016 period and CVs that have had multiple LLP licenses that have

been transferred on and off the vessel over the 2008-2016 period. To participate in the BSAI TLAS yellowfin sole limited access fishery, a LLP license with a BSAI TLAS yellowfin sole endorsement will need to be assigned to the participating CV. If the qualifying CVs have more than one LLP assigned to the vessel at the time, the vessel owner must specify which license to attach the endorsement. Of the 10 CV that would qualify for the BSAI TLAS yellowfin sole offshore limited access fishery under the most liberal eligibility criteria (Suboption 1.2.1), four CVs had more than one LLP license that could be credited with a landing of targeted BSAI TLAS yellowfin sole from 2008-2016. The owners of these LLP licenses will need to specify which of the eligible LLP licenses will be assigned the endorsement utilized to participate in the BSAI TLAS yellowfin sole offshore limited access fishery.

#### **2.7.2.2 Option 2.1**

Under this option, the limits on CVs delivering BSAI TLAS yellowfin sole catch to offshore processors would be lifted for the year if the TLAS allocation was equal to or greater than:

- Suboption 2.1.1 - 15,000 mt
- Suboption 2.1.2 - 20,000 mt
- Suboption 2.1.3 - 25,000 mt
- Suboption 2.1.4 - 30,000 mt

In those years where the CV restriction is vacated, any CV with the appropriate LLP endorsements could be authorized to target BSAI TLAS yellowfin sole and deliver the vessel's harvest to an offshore processing vessel. As noted in Table 2-23, since implementation of the BSAI TLAS yellowfin sole fishery in 2008, the TLAS allocation has exceeded 15,000 mt trigger (Suboption 2.1.1) in all years except 2016 when the allocation was 14,979. During that year, nine CV harvested 7,011 mt or 58% of the TLAS allocation. The fishery closed on June 8<sup>th</sup> with only 271 mt of the original allocation remaining. Raising the amount of BSAI TLAS yellowfin sole allocation to 20,000 mt under Suboption 2.1.2 or 25,000 mt under Suboption 2.1.3 to remove the CV restriction for the year, the trigger to remove the CV limitation would not have applied in 2015 – 2017 (Table 2-23). During 2015, the BSAI TLAS yellowfin sole allocation was 16,165 mt and six CVs harvested and delivered 7,202 mt of that allocation to offshore processors prior to the November 10 fishery closure. In 2017 so far, eight CVs have harvested and delivered 9,745 mt of BSAI TLAS yellowfin sole and the fishery is open. At a 30,000 mt trigger to remove the CV restriction for the year, the TLAS allocation was exceeded five of the last ten years.

**Table 2-23 BSAI TLAS yellowfin sole allocation, catch, remaining allocation, CV count, season closure date, and years the TLAS allocation was greater than 15,000 mt, 20,000 mt, 25,000 mt, or 30,000 mt TLAS allocation**

Year	BSAI TLA YFS allocation (mt)	BSAI TLA YFS target catch from 2008 - April 17, 2017 (mt)	Remaining BSAI TLA YFS allocation (mt)	Total CV count (delivering to motherships)	Season closure date	TLA allocation greater than 15,000 mt (Suboption 2.1.1)	TLA allocation greater than 20,000 mt (Suboption 2.1.2)	TLA allocation greater than 25,000 mt (Suboption 2.1.3)	TLA allocation greater than 30,000 mt (Suboption 2.1.4)
2008 <sup>^</sup>	32,512	20,017	12,495	3	31-Dec	Yes	Yes	Yes	Yes
2009 <sup>^</sup>	33,154	10,181	22,973	1	2-Oct	Yes	Yes	Yes	Yes
2010 <sup>^</sup>	22,369	19,421	2,948	0	8-Sep	Yes	Yes	Yes	No
2011	32,153	25,485	6,668	2	5-Oct	Yes	Yes	Yes	Yes
2012	36,297	28,140	8,157	3	31-Dec	Yes	Yes	Yes	Yes
2013	34,868	34,606	262	3	9-Nov	Yes	Yes	Yes	Yes
2014 <sup>3</sup>	29,707	27,720	1,987	3	31-Dec	Yes	Yes	Yes	No
2015	16,165	16,073	92	6	10-Nov	Yes	No	No	No
2016	14,979	14,708	271	9	8-Jun	No	No	No	No
2017	18,151	9,745	8,406	8	Still open	Yes	No	No	No

Source: NMFS Final Specifications

Source file: BSAI\_Yellowfin(4-17-17); current as of April 17, 2017

<sup>1</sup>ITAC = TAC - CDQ<sup>2</sup>Catch of YFS BSAI target catch by AM80 vessels has been removed from YFS BSAI target catch (2003-2007)<sup>3</sup>Fishery closed on 15-May for halibut PSC, but the fishery was opened 20-June after reapportionment from Pcod TLA fisher<sup>^</sup>BSAI TLA YFS allocation was adjusted to account for reapportionment of YFS from the BSAI TLA to Amendment 80 (see Table 4 for amounts reapportioned)

TLA = trawl | limited access

YFS = yellow fin sole

Although this option could provide harvesting opportunities for CVs not eligible for the BSAI TLAS yellowfin sole limited access fishery when sufficient allocation exists, this option does have some limitations that reduce the benefit of this option. One the limitations is potential for this option, given its specific metric ton amount for removing the eligibility requirements for the year, to encourage adversarial harvest specification negotiations for BSAI yellowfin sole TAC. Under this option, there is the potential for participants eligible to target BSAI TLAS yellowfin sole to advocate for a BSAI yellowfin sole TAC that results in an BSAI TLAS yellowfin sole allocation just shy of the trigger amount. In contrast, those CVs ineligible to participate in the limited access fishery would advocate for a BSAI yellowfin sole TAC that results in a BSAI TLAS yellowfin sole allocation higher than the trigger amount. In all likelihood, if there is no perceived risk of numerous ineligible CVs entering the BSAI TLAS yellowfin sole fishery, the negotiations for setting the BSAI yellowfin sole TAC with regard to the trigger amount would be a minor factor. This outcome is likely dependent on the number of eligible CVs selected under Option 1. For example, under Suboption 1.2.2 ten CVs would be eligible to participate in the BSAI TLAS yellowfin sole fishery, which leaves no ineligible CVs with historical participation in the fishery since 2008 that would likely advocate for an amount of yellowfin sole TAC sufficient to initiate the trigger. However, if there is a perceived risk of numerous ineligible CVs entering the BSAI TLAS yellowfin sole fishery, eligible CVs and AFA CPs would use their collective leverage to advocate for a lower BSAI yellowfin sole TAC to prevent ineligible CVs from entering the BSAI TLAS yellowfin sole fishery.

Another potential limitation of this option is it could reduce the incentive for CVs to reduce halibut mortality. Since this option would vacate the CV eligibility for ineligible CVs when BSAI TLAS yellowfin sole allocation is equal to or greater than the selected threshold, there is a potential that ineligible CVs entering the fishery could result in a race for BSAI TLAS yellowfin sole with eligible CVs and CPs. During those years when the limitation is vacated there is no protection for eligible CVs from

ineligible CVs. Eligible CVs that have formed a voluntary cooperative agreement with CPs, will have little incentive for those agreements if ineligible CVs do not have to meet the same yellowfin sole allocation and halibut PSC usage agreements. In general, during years when the BSAI TLAS yellowfin sole limited is vacated, the BSAI TLAS yellowfin sole fishery is comparable to the status quo alternative.

### **2.7.2.3 Option 2.2**

In February 2017, the Council added a new option for consideration that contrasted with knife edge approach utilized in Option 2.1. Option 2.2 would establish a BSAI TLAS yellowfin sole sideboard limit for ineligible CVs. Under the new option, CVs that do not meet the landings qualification established under Option 1, may target BSAI TLAS yellowfin sole only on that portion of the yellowfin sole TAC assigned to the BSAI trawl limited access fishery that is equal to or greater than:

- Suboption 2.2.1 - 15,000 mt
- Suboption 2.2.2 - 20,000 mt
- Suboption 2.2.3 - 25,000 mt
- Suboption 2.2.4 - 30,000 mt

This limit is not a guaranteed amount of BSAI TLAS yellowfin sole because CPs and eligible CVs could harvest all the BSAI TLAS yellowfin sole allocation, including the amount limited to ineligible CVs.

In addition, the option would limit the amount of halibut PSC that may be used by ineligible CVs targeting BSAI TLAS yellowfin sole defined under Option 2.2. The halibut PSC limit is based on the proportional share of BSAI TLAS yellowfin sole available to those ineligible vessels. This option does not allocate BSAI TLAS yellowfin sole and halibut PSC between the two CV groups but rather limits the amount of BSAI TLAS yellowfin sole harvest and halibut PSC mortality for ineligible CVs.

As an example of how this option works, assume the BSAI TLAS yellowfin sole allocation is 35,000 mt and the halibut PSC apportioned to the BSAI TLAS yellowfin sole fishery is 150 mt. Under Suboption 2.2.3, 25,000 mt of BSAI TLAS yellowfin sole would not be available for harvest by ineligible CVs, while the portion of BSAI TLAS yellowfin sole allocation over that 25,000 mt, in this example 10,000 mt, would be available for all CVs including ineligible CVs. The halibut PSC limit for the ineligible CVs that participate in the 10,000 mt of BSAI TLAS yellowfin sole portion would be 43 mt or 29% of the 150 mt of halibut PSC apportioned to the entire BSAI TLAS yellowfin sole fishery.

Given that this option would establish a BSAI TLAS yellowfin sole limit for ineligible CVs that would be based on sufficient TAC, NMFS would have to determine if sufficient yellowfin sole TAC and halibut PSC is available to open the fishery for ineligible CVs. The opening of this fishery will depend on the amount of BSAI TLAS yellowfin sole and the associated PSC limit available for the ineligible CVs, as well as, the number of CVs and the catch rates of the participating CVs. If the amount available to ineligible CVs is insufficient given potential fishing effort, the fishery may not open for ineligible CVs.

In addition, since final harvest specifications are not in place until late February or March each year, the ineligible BSAI TLAS yellowfin sole fishery may need to remain closed to directed fishing until the new harvest specifications are published in the Federal Register and effective. This should allow for ineligible CVs sufficient time to plan for a fishery, but it is possible the eligible CVs and AFA CPs could harvest the BSAI TLAS yellowfin sole allocation or utilize the halibut PSC before the ineligible CV can participate in the fishery. If enough yellowfin sole TAC and halibut PSC limit remains after the final harvest specifications are published and effective, then NMFS will open directed fishing for ineligible CVs after taking into consideration the number of participating CVs and their associated catch rates.

To provide a better understanding the BSAI TLAS yellowfin sole catch limits and its associated halibut PSC limit for ineligible CVs for each of the suboptions in Option 2.2, Table 2-24 provides the BSAI TLAS yellowfin sole limit and halibut PSC limit for ineligible CVs from 2008 – 2017 under each of the options. The halibut PSC limit estimates are based on an annual halibut PSC apportionment of a 150 mt to the BSAI TLAS yellowfin sole fishery. Looking at Suboption 2.2.1 (15,000 mt), the BSAI TLAS yellowfin sole limit for ineligible CVs would have ranged from a low of zero in 2016 to high of 21,297 mt in 2012, while the halibut PSC limit for the ineligible CVs ranged would have ranged from a low of zero in 2016 to a high of 88 mt in 2012. At the other extreme, Suboption 2.2.4 (30,000 mt), the BSAI TLAS yellowfin sole limit for ineligible CVs would have ranged from a low of zero in 2010, 2014, 2015, 2016, and 2017 to a high of 6,297 mt in 2012. Halibut PSC limit apportioned to the ineligible CVs would have ranged from a low of zero in 2010, 2014, 2015, 2016, and 2017 to a high of 26 mt in 2012. Overall, the 15,000 mt suboption provides the greatest harvest opportunity for ineligible CVs, while providing the least amount of protection to historic participants from ineligible CVs. In contrast, the 30,000 mt suboption provides the least amount of harvest opportunity for ineligible CVs, while providing the greatest amount of protection to historic participants from ineligible CVs.

**Table 2-24 BSAI TLAS yellowfin sole allocation, target catch, and remaining allocation from 2008 – April 17, 2017 and BSAI TLAS yellowfin sole catch limit for ineligible CVs and its associated halibut PSC limit for Suboptions 2.2.1 – 2.2.4**

Year	BSAI TLA YFS			Suboption 2.2.1 - 15,000 mt		Suboption 2.2.2 - 20,000 mt		Suboption 2.2.3 - 25,000 mt		Suboption 2.2.4 - 30,000 mt	
	allocation (mt)	BSAI TLA YFS target catch (mt)	Remaining BSAI TLA YFS allocation (mt)	BSAI TLA yellowfin sole ineligible CV limit	Halibut PSC for ineligible CVs*	BSAI TLA yellowfin sole ineligible CV limit	Halibut PSC for ineligible CVs*	BSAI TLA yellowfin sole ineligible CV limit	Halibut PSC for ineligible CVs*	BSAI TLA yellowfin sole ineligible CV limit	Halibut PSC for ineligible CVs*
2008 <sup>A</sup>	32,512	20,017	12,495	17,512	81	12,512	58	7,512	35	2,512	12
2009 <sup>A</sup>	33,154	10,181	22,973	18,154	82	13,154	60	8,154	37	3,154	14
2010 <sup>A</sup>	22,369	19,421	2,948	7,369	49	2,369	16	0	0	0	0
2011	32,153	25,485	6,668	17,153	80	12,153	57	7,153	33	2,153	10
2012	36,297	28,140	8,157	21,297	88	16,297	67	11,297	47	6,297	26
2013	34,868	34,606	262	19,868	85	14,868	64	9,868	42	4,868	21
2014 <sup>3</sup>	29,707	27,720	1,987	14,707	74	9,707	49	4,707	24	0	0
2015	16,165	16,073	92	1,165	11	0	0	0	0	0	0
2016	14,979	14,708	271	0	0	0	0	0	0	0	0
2017	18,151	9,745	8,406	3,151	26	0	0	0	0	0	0

Source: NMFS Final Specifications

Source file: BSAI\_Yellowfin(4-17-17); Current as of April 17, 2017

\*Assumes 150 mt of total halibut PSC apportionment for the BSAI TLA yellowfin sole fishery

<sup>1</sup>ITAC = TAC - CDQ

<sup>2</sup>Catch of YFS BSAI target catch by AM80 vessels has been removed from YFS BSAI target catch (2003-2007)

<sup>3</sup>Fishery closed on 15-May for halibut PSC, but the fishery was opened 20-June after reapportionment from Pcod TLA fisher

<sup>A</sup>BSAI TLA YFS allocation was adjusted to account for reapportionment of YFS from the BSAI TLA to Amendment 80 (see Table 4 for amounts reapportioned)

TLA = trawl limited access

YFS = yellowfin sole

A factor in determining an appropriate BSAI TLAS yellowfin sole limit for ineligible CVs is the linkage between the number of qualified eligible CVs determined in Option 1 and the BSAI TLAS yellowfin sole limit for ineligible CVs that is determined by Option 2.2. In considering this linkage between these two options, the decision maker should balance sufficient protection for eligible CVs and AFA CPs while also providing harvest opportunities for ineligible CVs when there is sufficient BSAI yellowfin sole TAC. For example, Suboption 1.1.2 would authorize three CVs to participate in the BSAI TLAS yellowfin sole fishery. If Suboption 2.2.4 (30,000 mt) were selected, that denotes that 30,000 mt BSAI TLAS yellowfin sole is necessary so as not to unduly constrain the three eligible CVs and AFA CPs. At the same time, any amount of BSAI TLAS yellowfin sole allocation equal to or greater than 30,000 mt provides enough harvest opportunity for all ineligible CVs, which in this example could be 12 CVs that have historically

participated in this fishery plus any new CV entrants. Relatively to other suboptions in Option 2.2, the 30,000 mt floor for the ineligible CVs may be more than what is necessary to provide protection for the three eligible CVs and AFA CPs based on utilization of previous allocations (see Table 2-4), while at the same time, potentially not providing sufficient harvest opportunity for ineligible CVs during periods of high BSAI yellowfin TAC. In contrast, if Suboption 1.2.1, which authorizes 10 eligible CVs, were coupled with Suboption 2.2.4, the limit could be an appropriate amount to not unduly constrain eligible CVs and AFA CPs while providing a limited harvest opportunity for the few ineligible CVs and any new CV entrant.

There is also the potential that the creation of a fishery for ineligible CVs could shorten the BSAI TLAS yellowfin sole fishery season and hamper efforts to reduce halibut mortality. The impact of an ineligible fishery on reducing season length depends in large part on the potential effort from ineligible CVs in that fishery. If the potential effort by ineligible CVs is projected to be significant, there could be an incentive for the eligible CVs and AFA CPs to concentrate their fishing effort to harvest as much of the BSAI TLAS yellowfin sole allocation prior to the ineligible CVs harvesting their limit, which could hamper efforts to reduce halibut mortality. In contrast, if potential effort by ineligible CVs is projected to be minor, eligible CVs and AFA CPs would continue to utilize the voluntary cooperative management to lengthen the fishery and reduce halibut mortality without concern of ineligible CVs harvesting a large portion of the BSAI TLAS yellowfin sole allocation.

Another factor in determine an appropriate floor for ineligible CVs and protecting historic participants is the potential impacts to harvest specification negotiations for BSAI yellowfin sole TAC. Option 2.2, if not well balanced with Option 1, could result in some difficulty during harvest specifications between historic participants and ineligible CVs. Like Option 2.1, the outcome of this option is likely dependent on the number of eligible CVs selected under Option 1. For example, under Suboption 1.2.2, ten CVs would be eligible to participate in the BSAI TLAS yellowfin sole fishery, which leaves no ineligible CVs with historical participation in the fishery since 2008 that would likely advocate for an amount of yellowfin sole TAC sufficient to generate a fishery for ineligible CVs. In contrast, under Suboption 1.1.1, three CVs would be eligible to participate in the BSAI TLAS yellowfin sole fishery, which leaves seven ineligible CVs with historical participation in the fishery since 2008 that could advocate for an amount of yellowfin sole TAC sufficient to generate a fishery for ineligible vessels, which could be a factor in negotiations during specifications process.

One of the benefits of Option 2.2, relative to Option 2.1, is the potential for lower halibut mortality while at the same time providing opportunities for ineligible CVs to participate in the BSAI TLAS yellowfin sole fishery during high TACs. Unlike Option 2.1, this option limits the amount of BSAI TLAS yellowfin sole and halibut PSC assigned to the BSAI TLAS yellowfin sole fishery that ineligible CVs may utilize. The limitation on ineligible CVs provides an environment for eligible CVs to form voluntary cooperative agreements with CPs without the potential for ineligible CVs unduly constrain eligible CVs and AFA CPs. This would allow both CPs and eligible CVs to fish for BSAI TLAS yellowfin sole at a slower pace, which could be useful in reducing halibut mortality in the fishery.

### **2.7.3 Management and Enforcement Considerations**

None of the alternatives would increase NMFS' administrative burden or complicate the annual harvest specifications process compared to the status quo. Catcher vessels targeting yellowfin sole in the Bering Sea currently deliver unsorted codends to motherships or CPs acting like motherships with full observer coverage, and this would not change under any of the alternatives.

Option 2.2 would establish a BSAI TLAS yellowfin sole limit for ineligible CVs. NMFS would have to determine if sufficient yellowfin sole TAC and halibut PSC is available to open the fishery for ineligible



CVs. The opening of this fishery will depend on the amount of BSAI TLAS yellowfin sole and the associated PSC limit available for the ineligible CVs, as well as, the number of CVs and the catch rates of the participating CVs. If the amount available to ineligible CVs is insufficient given potential fishing effort, the fishery may not open for ineligible CVs. In addition, since final harvest specifications are not in place until late February or March each year, the ineligible BSAI TLAS yellowfin sole fishery may need to remain closed to directed fishing until the new harvest specifications are published in the Federal Register and effective. If enough yellowfin sole TAC and halibut PSC limit remains after the final harvest specifications are published and effective, then NMFS will open directed fishing for ineligible CVs after taking into consideration the number of participating CVs and their associated catch rates.

NMFS would use observer data from motherships to track CV catch of yellowfin sole using existing reporting methods and catch accounting system. NMFS would continue to sum all directed yellowfin sole, non-target species, and PSC by CVs and close the directed fishery, as necessary, when a limit has been reached. Limiting trawl CV access to yellowfin sole harvest in the Bering Sea is manageable from NMFS's perspective, as it does not alter the harvest allocation in the Bering Sea. Thus, no increase in monitoring burden on management is expected. Likewise, there are no anticipated changes to enforcement efforts in this fishery.

## 2.7.4 Summary of Impacts of Alternatives

Table 2-25 provides a table summarizing the effects of the alternatives on CVs, CPs, and motherships.

**Table 2-25 Summary of effects of alternatives on CVs, CPs, and motherships**

	Catcher vessels	Motherships	AFA Catcher processors
<b>Alternative 1 (Status quo)</b>	<ul style="list-style-type: none"> <li>• Likely continue at same activity level, but there is some potential for a few new CVs entrants in the future if more motherships enter the fishery</li> </ul>	<ul style="list-style-type: none"> <li>• Likely continue at same activity level, but there is some potential for a few new mothership entrants in the future</li> </ul>	<ul style="list-style-type: none"> <li>• Likely continue at same level of participation, but effort will depend on BS pollock ITAC levels</li> </ul>
<b>Alternative 2</b>			
<b>Option 1</b>			
<b>Suboption 1.1.1.</b>	<ul style="list-style-type: none"> <li>• 8 CVs eligible, while all other CVs ineligible</li> <li>• Greater potential for voluntary cooperative agreements with CPs and reduced halibut PSC</li> <li>• Limited potential spillover effects in BSAI trawl CV Pacific cod fishery</li> </ul>	<ul style="list-style-type: none"> <li>• Motherships continue to participate in fishery since offshore processing opportunities are still available</li> </ul>	<ul style="list-style-type: none"> <li>• Continued participation, but effort will depend on BS pollock ITAC levels</li> <li>• Greater potential for voluntary cooperative agreements with eligible CVs</li> </ul>
<b>Suboption 1.1.2</b>	<ul style="list-style-type: none"> <li>• 3 CVs eligible, while all other CVs ineligible</li> <li>• Greatest potential for voluntary cooperative agreements with CPs relative to all other suboptions under Option 1 and greatest potential for reduced halibut PSC</li> <li>• Greatest potential for spillover effects in BSAI trawl CV Pacific cod fishery through increased fishing effort relative to all other suboptions</li> </ul>	<ul style="list-style-type: none"> <li>• Most motherships will exit the fishery since offshore processing opportunities are limited relative to all other suboptions under Option 1</li> </ul>	<ul style="list-style-type: none"> <li>• Continued participation, but effort will depend on BS pollock ITAC levels</li> <li>• Greatest potential for voluntary cooperative agreements with eligible CVs relative to all other suboptions under Option 1</li> </ul>

	<b>Catcher vessels</b>	<b>Motherships</b>	<b>AFA Catcher processors</b>
	under Option 1		
<b>Suboption 1.2.1</b>	<ul style="list-style-type: none"> <li>• 10 CVs eligible, while all other CVs ineligible</li> <li>• Greater potential for voluntary cooperative agreements with CPs and lower halibut PSC</li> <li>• Limited potential for spillover effects in BSAI trawl CV Pacific cod fishery</li> </ul>	<ul style="list-style-type: none"> <li>• Greatest opportunity for motherships to continue to participate in fishery relative to all other suboptions under Option 1.</li> </ul>	<ul style="list-style-type: none"> <li>• Continued participation, but effort will depend on BS pollock ITAC levels</li> <li>• Greater potential for voluntary cooperative agreements with eligible CVs</li> </ul>
<b>Suboption 1.2.2</b>	<ul style="list-style-type: none"> <li>• 7 CVs eligible, while all other CVs ineligible</li> <li>• Greater potential for voluntary cooperative agreements with CPs and lower halibut PSC</li> <li>• Limited potential for spillover effects in BSAI trawl CV Pacific cod fishery</li> </ul>	<ul style="list-style-type: none"> <li>• Motherships continue to participate in fishery since offshore processing opportunities are still available</li> </ul>	<ul style="list-style-type: none"> <li>• Continued participation, but effort will depend on BS pollock ITAC levels</li> <li>• Greater potential for voluntary cooperative agreements with eligible CVs</li> </ul>
<b>Option 2</b>			
<b>Option 2.1</b>	<ul style="list-style-type: none"> <li>• Could provide harvesting opportunities for ineligible CVs during periods of high BSAI yellowfin sole TAC</li> <li>• Creates an adversarial environment during harvest specifications if Suboption 1.1.2 is selected</li> </ul>	<ul style="list-style-type: none"> <li>• Could provide processing opportunities given ineligible CVs could harvest BSAI TLAS yellowfin sole</li> </ul>	<ul style="list-style-type: none"> <li>• Continued participation, but effort will depend on BS pollock ITAC levels</li> </ul>
<b>Option 2.2</b>	<ul style="list-style-type: none"> <li>• Could provide harvesting opportunities for ineligible CVs</li> <li>• Balance between number of qualified CVs and the appropriate floor limit for the ineligible CVs is necessary for success of this option</li> <li>• Could create an adversarial environment during harvest specifications if Suboption 1.1.2 is selected</li> </ul>	<ul style="list-style-type: none"> <li>• Could provide processing opportunities given ineligible CVs could harvest BSAI TLAS yellowfin sole above established floor limit</li> </ul>	<ul style="list-style-type: none"> <li>• Continued participation, but effort will depend on BS pollock ITAC levels</li> </ul>

## 2.7.5 Summation of the Alternatives with Respect to Net Benefit to the Nation

Overall, this action is likely to have a limited effect on net benefits to the Nation. In large part, the action affects distributional equities among CVs harvesting BSAI TLAS yellowfin sole allocation and processing that harvest by offshore processors. There is some potential benefit for increased producer surplus through voluntary cooperative agreements amongst eligible CVs and participating CPs. Eligible participants would be able to slow the pace of fishing and processing, thus potentially reduce expenditures on inputs and increase outputs (i.e., quality and quantity) slightly. Although there is likely a greater potential for cooperative management of the BSAI TLAS yellowfin sole fishery under the proposed action relative to status quo, the ability of the CPs to harvest a significant portion of the BSAI TLAS yellowfin sole fishery could inhibit voluntary cooperative management and therefore eliminate these potential producer surplus benefits.

### 3 Environmental Assessment

There are four required components for an environmental assessment. The purpose and need for the proposed action is described in Section 2.2 and the alternatives are described in Section 2.4. A list of preparers and agencies and persons consulted is included in Section 6. This section evaluates the impacts of the alternatives and options on the various environmental components. The economic and social impacts of this action are described in detail in the Regulatory Impact Review (RIR) and Initial Regulatory Flexibility Analysis (IRFA) portions of this analysis (Sections 2 and 4, respectively).

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

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

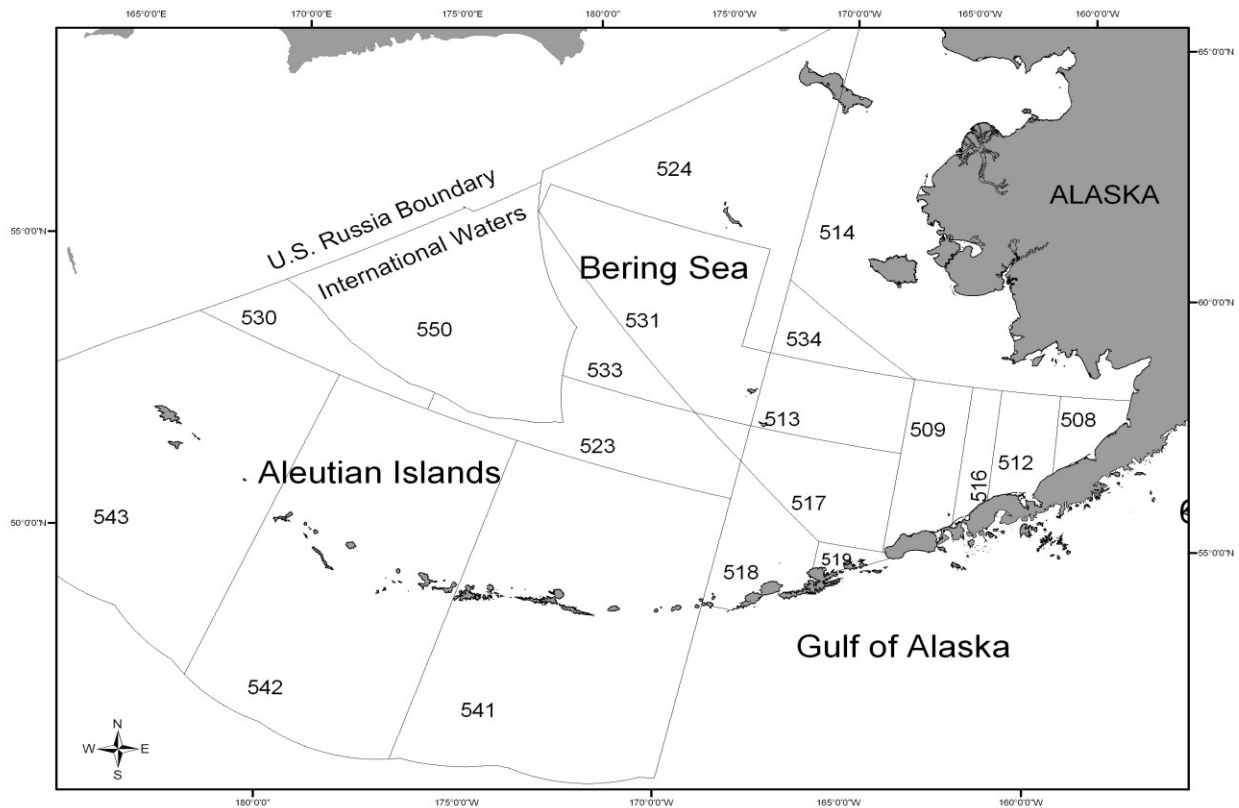
*“the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually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

The cumulative impact of reasonably foreseeable future actions is addressed in Section 3.2.3.

#### 3.1 Description of the Area

The Council motion clarifies that the action would affect yellow fin sole harvested in the BSAI subarea by federally permitted vessels. The BSAI includes the Economic Exclusive Zone (EEZ) from 3 nm to 200 nm off Alaska. State of Alaska waters are those from 0 nm to 3 nm offshore (refer to Figure 3.1 for a map of the regulatory and reporting areas in the BSAI). Yellowfin sole are not harvested in the Aleutian Islands Area (areas 541, 542, and 543). Therefore the proposed action focuses on the yellow fin sole fishery in Bering Sea.

**Figure 3.1 Regulatory and reporting areas in the Bering Sea and Aleutian Islands.**



## 3.2 Analytical Methods

The proposed regulatory change is not expected to affect all environmental components of the Bering Sea. As a result of the proposed action, the only potentially affected component is the human environment. Other environmental components: yellowfin sole, prohibited species, marine mammals, seabirds, essential fish habitat, biodiversity and ecosystem health would not be affected by this proposed action. The effects of the alternatives on the human environment component would be caused by limiting access to the fishery, which may have economic and distributional impacts to fishery participants. Given the limited scope of this proposed action, the human environment in the Bering Sea management area is the only potential environmental component included in the EA. Economic and social effects from the proposed action are analyzed in Section 2.7. The resource component in relation to the alternatives is discussed below.

### 3.2.1 Documents incorporated by reference in this analysis

This EA relies heavily on the information and evaluation contained in previous environmental analyses, and these documents are incorporated by reference. The documents listed below contain information about the fishery management areas, fisheries, marine resources, ecosystem, social, and economic elements of the groundfish fisheries. They also include comprehensive analysis of the effects of the fisheries on the human environment, and are referenced in the analysis of impacts throughout this chapter.

**Alaska Groundfish Harvest Specifications Final Environmental Impact Statement (NMFS 2007).**

This EIS provides decision makers and the public an evaluation of the environmental, social, and economic effects of alternative harvest strategies for the federally managed groundfish fisheries in the GOA and the Bering Sea and Aleutian Islands management areas and is referenced here for an understanding of the groundfish fishery. The EIS examines alternative harvest strategies that comply with Federal regulations, the Fishery Management Plan (FMP) for Groundfish of the GOA, the Fishery Management Plan (FMP) for Groundfish of the BSAI Management Area, and the Magnuson-Stevens Fishery Conservation and Management Act. These strategies are applied using the best available scientific information to derive the total allowable catch (TAC) estimates for the groundfish fisheries. The EIS evaluates the effects of different alternatives on target species, non-specified species, forage species, prohibited species, marine mammals, seabirds, essential fish habitat, ecosystem relationships, and economic aspects of the groundfish fisheries. This document is available from <https://alaskafisheries.noaa.gov/fisheries/groundfish-harvest-specs-eis>.

**Stock Assessment and Fishery Evaluation (SAFE) Report for the Groundfish Resources of the BSAI (NMFS 2016).**

Annual SAFE reports review recent research and provide estimates of the biomass of each species and other biological parameters. The SAFE report includes the acceptable biological catch (ABC) specifications used by NMFS in the annual harvest specifications. The SAFE report also summarizes available information on the ecosystems and the economic condition of the groundfish fisheries off Alaska. This document is available from <http://www.afsc.noaa.gov/refm/stocks/assessments.htm>.

**Final Programmatic Supplemental Environmental Impact Statement (PSEIS) on the Alaska Groundfish Fisheries (NMFS 2004).**

The PSEIS evaluates the Alaska groundfish fisheries management program as a whole, and includes analysis of alternative management strategies for the GOA and Bering Sea/Aleutian Islands (BSAI) groundfish fisheries. The EIS is a comprehensive evaluation of the status of the environmental components and the effects of these components on target species, non-specified species, forage species, prohibited species, marine mammals, seabirds, essential fish habitat, ecosystem relationships, and economic aspects of the groundfish fisheries. A Supplemental Information Report (NPFMC and NMFS 2015) was prepared in 2015 which considers new information, and affirms that new information does not indicate that there is now a significant impact from the groundfish fisheries where the 2004 PSEIS concluded that the impact was insignificant. The PSEIS document is available from <https://alaskafisheries.noaa.gov/node/33552>, and the Supplemental Information Report from <https://alaskafisheries.noaa.gov/sites/default/files/sir-pseis1115.pdf>.

**Environmental Assessment/ Regulatory Impact Review/ Initial Regulatory Flexibility Analysis (EA/RIR/IRFA) for Amendment 111 to the Fishery Management Plan for Groundfish of the Bering Sea/Aleutian Islands Management Area (NMFS 2016).**

This document analyzes proposed management measures to reduce Pacific halibut prohibited species catch (PSC) limits in the Bering Sea/Aleutian Islands (BSAI) groundfish fisheries. PSC limit reductions are considered for various sectors, including the BSAI trawl limited access sector, the Amendment 80 sector, longline CVs, longline catcher processors, and the Community Development Quota (CDQ) sector (i.e., a reduction to the CDQ's allocated prohibited species quota reserve). The objective of reducing PSC limits would be to minimize bycatch of halibut in the BSAI groundfish fisheries to the extent practicable, which may provide additional harvest opportunities in the directed halibut fishery. This document is available from <https://alaskafisheries.noaa.gov/sites/default/files/analyses/finalbsai111earirifa0116.pdf>.

### 3.2.2 Resource components addressed in the analysis

Table 3.1 shows the components of the human environment and whether the proposed action and its alternatives have the potential to impact that resource component and thus require further analysis. Extensive environmental analysis on all resource components is not needed in this document, because the proposed action is not anticipated to have environmental impacts on all resource components.

Any potential effects of the alternatives would result from limiting access of yellowfin sole harvest to CVs that have previously participated in the fishery at some level. Current fishing regulations (e.g., season and gear types), harvest limits for target species, bycatch, and prohibited species, and regulations protecting habitat and important breeding areas have been described and analyzed in previous NEPA documents, including the Alaska Groundfish Harvest Specifications Final Environmental Impact Statement (NMFS 2007), the Final Programmatic Supplemental Environmental Impact Statement (PSEIS) on the Alaska Groundfish Fisheries (NMFS 2004), the EA/RIR/IRFA for Amendment 111 to the Fishery Management Plan for Groundfish of the Bering Sea/Aleutian Islands Management Area to Revise the Bering Sea/Aleutian Islands Halibut Prohibited Species Catch Limits (NMFS 2016), as well as in the 2016 SAFE document (NPFMC 2016) as described above and incorporated by reference. None of the alternatives would change TAC amounts, methods, or areas closed to trawling. The amount of yellowfin sole harvest by vessels fishing with trawl gear in the Bering Sea yellowfin sole TLA fishery is expected to remain unchanged. None of the alternatives would change existing protection measures or allowable harvest amounts for important prey species. If access to the fishery is limited and fewer vessels participate relative to the last few years, the fishing season duration may be extended compared to the status quo. However, no effects from this action are expected on groundfish, ecosystem component species, marine mammals, seabirds, habitat, and the ecosystem that have not already been considered in previous NEPA analyses. The action has the potential to provide beneficial effects on halibut by reducing bycatch of that species, as described in Section 2.7.1.2 of the RIR. Further potential impacts from the action are limited to the social and economic components. The analysis of potential impacts on those components may be found in Section 2.7.

**Table 3.1 Resources potentially affected by the proposed action and alternatives.**

Potentially affected resource component							
Groundfish	Halibut	Ecosystem Component Species	Marine Mammals	Seabirds	Habitat	Ecosystem	Social And economic
N	Y	N	N	N	N	N	Y

N = no impact anticipated by each alternative on the component.

Y = an impact is possible if each alternative is implemented.

#### 3.2.2.1 Halibut

Prohibited species catch limits for halibut were analyzed in the EA/RIR/IRFA for Amendment 111 to the Fishery Management Plan for Groundfish of the Bering Sea/Aleutian Islands Management Area to Revise the Bering Sea/Aleutian Islands Halibut Prohibited Species Catch Limits (NMFS 2016). The proposed action limiting access for offshore trawl CVs in the BSAI trawl limited access sector of the yellowfin sole fishery analyzed in this EA/RIR/IRFA will not affect halibut PSC limits, but does have the potential to reduce take of halibut PSC in this fishery, as described in Section 2.7.1.2 above. However, such savings are not guaranteed under any of the alternatives, nor are they predictable due to the suite of variables that can affect halibut bycatch in this fishery. Variables affecting the halibut PSC take in this fishery include, but are not limited to, fleet behavior, such as cooperation between vessels under agreement with the same fishing company or individual vessel adoption of industry “best practices” for halibut take reduction, reallocation of halibut PSC between fisheries and other fishery management decisions, and inter-annual variability of environmental conditions and biological factors. While this action has potential to result in

beneficial effects on halibut under some circumstances, there is no expectation of any negative effects on halibut, since PSC limits for this fishery are established for each year, and the fishery would be closed if that limit is reached before the yellowfin sole TAC is reached .

### 3.2.3 Cumulative effects analysis

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

## 3.3 NEPA Summary

One of the purposes of an environmental assessment is to provide the evidence and analysis necessary to decide whether an agency must prepare an environmental impact statement (EIS). The Finding of No Significant Impact (FONSI) is the decision maker's determination that the action will not result in significant impacts to the human environment, and therefore, further analysis in an EIS is not needed. The CEQ regulations at 40 CFR 1508.27 state that the significance of an action should be analyzed both in terms of "context" and "intensity." An action must be evaluated at different spatial scales and settings to determine the context of the action. Intensity is evaluated with respect to the nature of impacts and the resources or environmental components affected by the action. These factors form the basis of the analysis presented in this Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis. The results of that analysis are summarized here for those criteria.

*Context:* For this action, the setting is the Bering Sea Management Area. The effects of this action are limited to this area and to the entities and individuals directly and indirectly participating in the commercial fisheries in the Bering Sea and to others who use the ocean resources of the Bering Sea. Although the proposed action concerns the use of a present and future resource, the expected impacts on the human environment (described below) are relatively small and localized. Therefore, it is unlikely that the action will have an impact on society as a whole or regionally.

*Intensity:* Considerations to determine intensity of the impacts are set forth in 40 CFR 1508.27(b). Each consideration is addressed below in order as it appears in the NMFS Instruction 30-124-1 dated July 22, 2005, Guidelines for Preparation of a FONSI. The sections of the EA that address the considerations are identified.

- 1) Can the proposed action reasonably be expected to jeopardize the sustainability of any target<sup>4</sup> species that may be affected by the action?

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<sup>4</sup> Note, "target" refers to the target of the action, not "target groundfish" as defined in the FMP.

Response: No. The primary target species that may be affected by this proposed action is yellowfin sole (*Limanda aspera*). The proposed action would not change the harvest specifications or TAC for yellowfin sole in the Bering Sea.

In general, the potential changes in harvest access as a result of the proposed action are not expected to impact yellowfin sole stock status in the Bering Sea. The yellowfin sole fisheries would continue to be managed under the annual groundfish harvest specifications process, which authorizes a maximum TAC of yellowfin sole in the Bering Sea groundfish fisheries. The proposed action would not change this process, the annual allocations of yellowfin sole, or the requirements that catch of yellowfin sole is maintained at or below allocated amounts. The effects of the harvest of the annual TACs on the sustainability of yellowfin sole are evaluated each year in the stock assessment and NEPA documents supporting the annual groundfish harvest specifications process. This proposed action would either limit the access to yellowfin sole harvest to CVs that have historically participated in the fishery or limit access to yellowfin sole harvest to CVs that have historically participated in the fishery in years where the yellowfin sole TAC is below an established threshold. This action is not expected to modify the overall harvests of yellowfin sole and is not expected to result in changes in the location of harvest. No potential impacts on prey availability and habitat are expected and therefore are not likely to affect the sustainability of the yellowfin sole stock (EA Section 3.2.2).

- 2) Can the proposed action reasonably be expected to jeopardize the sustainability of any non-target species?

Response: No. The non-target species that could be impacted by this proposed action include 1) groundfish species in the Bering Sea that are managed under TAC limits, but that are not target species for this particular action, and 2) other non-target species that are not managed under TACs, including halibut PSC.

Relatively small amounts of other living marine resources that are not managed with TACs may inadvertently be caught by trawl CVs in the Bering Sea. However, because no additional fishing for yellowfin sole is expected under this action, the incidental catch of other non-target species also is not expected to change in any way that would jeopardize the sustainability of these species (EA Section 3.2.2).

- 3) Can the proposed action reasonably be expected to cause substantial damage to the ocean and coastal habitats and/or essential fish habitat as defined under the Magnuson-Stevens Act and identified in the fishery management plans (FMPs)?

Response: No. The proposed action is not expected to affect ocean and coastal habitats, EFH, or any ecosystem component of the environment beyond those anticipated for the BSAI groundfish fisheries as a whole. The proposed action will not increase overall harvests of groundfish, nor is there expected to be any shift in the location of fishing effort, methods, or gear types by CVs fishing for yellowfin sole, and thus no change to the overall pattern of where and how groundfish are harvested in the BSAI fisheries. Any change in fishing season duration as a result of this action is not expected to affect ocean and coastal habitats, EFH, or any ecosystem component of the environment beyond those anticipated for the BSAI groundfish fisheries as a whole (EA Section 3.2.2).

- 4) Can the proposed action be reasonably expected to have a substantial adverse impact on public health or safety?

Response: No. Public health and safety will not be affected in any way not evaluated under previous actions or disproportionately as a result of the proposed action. The action under the any of the alternatives will not change fishing methods (including gear types) or timing of fishing (EA Section 3.2.2).



- 5) Can the proposed action reasonably be expected to adversely affect endangered or threatened species, marine mammals, or critical habitat of these species?

Response: No. The proposed action would not adversely affect endangered or threatened species, marine mammals, or critical habitat of these species. The proposed action would not affect endangered and threatened species or critical habitat in any manner not considered in prior consultations on the BSAI groundfish fisheries. The harvest of yellowfin sole would continue to occur within the limits established in the annual groundfish harvest specifications by vessels the same as or similar to those currently fishing for yellowfin sole in the Bering Sea.

The vessels affected by the proposed action would continue to be required to comply with all Steller sea lion protection measures including no-transit areas, closed areas, and vessel monitoring system requirements. Therefore, this proposed rule would result in no substantial change to the actions analyzed in the biological opinion dated April 2, 2014, in which NMFS found that the groundfish fisheries in the BSAI are not likely to jeopardize the continued existence of the western distinct population segment of Steller sea lions or destroy or adversely modify its designated critical habitat (EA Section 3.2.2).

- 6) Can the proposed action be expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (e.g., benthic productivity, predator-prey relationships, etc.)?

Response: No. The proposed action will not make changes to timing and location of fishing for yellowfin sole by trawl CVs in the Bering Sea. No significant changes in total harvests or where and how fishing occurs are expected. Any change in fishing season duration is not expected to have an impact on biodiversity and/or ecosystem function within the affected area. Therefore, the proposed action is not expected to have a substantial impact on biodiversity and/or ecosystem function within the affected area (EA Section 3.2.2).

- 7) Are significant social or economic impacts interrelated with natural or physical environmental effects?

Response: No. The EA analyzes the economic and social impacts of the proposed action and concludes that the social and economic impacts are not significant and not interrelated with natural or physical environmental effects (RIR Chapter 2)

- 8) Are the effects on the quality of the human environment likely to be highly controversial?

Response: No. The proposed action is not controversial and no controversy was noted in public comments to the Council or NMFS about the data and information used to evaluate the impacts of the action on the human environment. The proposed action is anticipated to either limit future access to the fishery to CVs that have some level of previous participation in the fishery or would limit access to yellowfin sole harvest to CVs that have historically participated in the fishery in years where the yellowfin sole TAC is below an established threshold.

- 9) Can the proposed action reasonably be expected to result in substantial impacts to unique areas, such as historic or cultural resources, park land, prime farmlands, wetlands, wild and scenic rivers or ecologically critical areas?

Response: No. This action would not affect any categories of areas on shore. Because this action affects commercial fishing in the offshore waters of the Bering Sea, it will not impact any historic or cultural resources, park land, prime farmlands, wetlands, or wild and scenic rivers. The marine waters where the fisheries occur contain ecologically critical areas. Effects on the unique characteristics of these areas are

not anticipated to occur with this action because the amount of fish removed by vessels would be within the specified TAC harvest levels (EA Section 3.2.2)

- 10) Are the effects on the human environment likely to be highly uncertain or involve unique or unknown risks?

Response: No. The proposed action will not make any changes to timing and location of fishing for yellowfin sole by trawl CVs in the Bering Sea. No significant changes in total harvests or where and how fishing occurs are expected. Any change in fishing season duration is not expected to be highly uncertain or involve unique or unknown risks. The effects of the BSAI groundfish fisheries on the human environment are evaluated each year in the stock assessment and NEPA documents supporting the annual groundfish harvest specifications process (EA Section 3.2.2).

- 11) Is the proposed action related to other actions with individually insignificant, but cumulatively significant impacts?

Response: No past, present, or reasonably foreseeable future actions were identified that would combine with the effects of this action to result in cumulatively significant impacts (EA Section 3.2.3).

- 12) Is the proposed action likely to adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources?

Response: No. Because this action affects commercial fishing in the offshore waters of the Bering Sea, it will not impact any districts, sites, highways, structures, or objects listed or eligible for listing in the National Register of Historic Places. In addition, the EA did not identify any potential for the proposed action to cause loss or destruction of significant scientific, cultural, or historical resources (EA Section 3.2.2).

- 13) Can the proposed action reasonably be expected to result in the introduction or spread of a nonindigenous species?

Response: No. This action will not affect the introduction or spread of non-indigenous species, because it does not change fishing practices that may introduce such organisms into the marine environment (EA Section 3.2.2).

- 14) Is the proposed action likely to establish a precedent for future actions with significant effects or represent a decision in principle about a future consideration?

Response: No. This action would either limit access to harvest of yellowfin sole in the Bering Sea to trawl CVs with some level of previous participation in the fishery or would limit access to yellowfin sole harvest to CVs that have historically participated in the fishery in years where the yellowfin sole TAC is below an established threshold.. This action does not establish a precedent for future action with significant effects, because this type of approach has been used in the past as a management tool for sector stability to recognize historic participants in Alaska groundfish fisheries. Pursuant to NEPA, for all future amendments to the FMPs, appropriate environmental analysis documents will be prepared to inform the decision makers of potential impacts to the human environment and to implement mitigation measures to avoid significant adverse impacts (EA Section 3.2.2).

- 15) Can the proposed action reasonably be expected to threaten a violation of Federal, state, or local law or requirements imposed for the protection of the environment?

Response: No. This action does not create any known violation of Federal, State, or local laws or requirements imposed for the protection of the environment (EA Section 3.2.2).

16) Can the proposed action reasonably be expected to result in cumulative adverse effects that could have a substantial effect on the target species or non-target species?

Response: No. No cumulative effects were identified that would result in significant adverse effect on target and non-targeted species. (EA Section 3.2.3)

## 4 Initial Regulatory Flexibility Analysis

### 4.1 Introduction

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

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

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

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

### 4.2 IRFA Requirements

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

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

- A description of any significant alternatives to the proposed rule that accomplish the stated objectives of the proposed action, consistent with applicable statutes, and that would minimize any significant economic impact of the proposed rule on small entities. Consistent with the stated objectives of applicable statutes, the analysis shall discuss significant alternatives, such as:
  1. The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities;
  2. The clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities;
  3. The use of performance rather than design standards;
  4. An exemption from coverage of the rule, or any part thereof, for such small entities.

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

### 4.3 Definition of a Small Entity

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

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

Section 601(3) of the RFA provides that an agency, after consultation with SBA’s Office of Advocacy and after an opportunity for public comment, may establish one or more definitions of “small business” which are appropriate to the activities of the agency. In accordance with this provision, NMFS has established a small business size standard for all businesses in the commercial fishing industry, for the purpose of compliance with the Regulatory Flexibility Act only. A business is considered to be a small business if it is independently owned and operated and not dominant in its field of operation (including its affiliates) and if it has combined annual gross receipts not in excess of \$11.0 million for all its affiliated operations worldwide. The \$11.0 million standard applies to all businesses classified under the North American Industry Classification System (NAICS) code 11411 for commercial fishing, including all businesses classified as commercial finfish fishing (NAICS 114111), commercial shellfish fishing (NAICS 114112), and other commercial marine fishing (NAICS 114119) businesses.

For fish processing businesses, the agency relies on the SBA size criteria. A seafood processor (NAICS 311710) is a small business if it is independently owned and operated, not dominant in its field of operation, and employs 750 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide. A business that both harvests and processes fish (i.e., a catcher/processor) is a small business if it meets the criteria for the applicable fish harvesting operation (i.e., the \$11.0 million standard described above). A wholesale business servicing the fishing industry is a

small business if it employs 100 or fewer persons on a full-time, part-time, temporary, or other basis, at all its affiliated operations worldwide.

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

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

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

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

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

#### **4.4 Reason for Considering the Proposed Action**

The Amendment 80 program assigns a portion of the BSAI yellowfin sole (TAC) to a TLAS fishery. Amendment 80 catcher processors are precluded from fishing in the TLAS fishery, however they are not prohibited from acting as a mothership for CVs in this fishery. Since the implementation of the trawl limited access fishery in 2008, American Fisheries Act (AFA) and Non-AFA CVs, AFA catcher processors, floating processors, and Amendment 80 motherships have participated in the TLAS fishery.

In 2015, new vessels entered the TLAS fishery. Historic participants are concerned about the impact of these new participants on their access to the yellowfin sole in the TLAS fishery.

The Council has recognized the concern of historic participants in the TLAS fishery by establishing a control date of October 13, 2015, that may be used as a reference date for a future management action to limit access to the offshore sector of the TLAS fishery. Limiting access may help ensure that the TLAS fishery continues to provide benefits to historic participants, mitigate the risk that a “race for fish” could develop, and help to maintain the consistently low rates of halibut bycatch in this fishery. The Council also recognizes that when the TAC assigned to the TLAS fishery is relatively high, opportunities for new entrants could be provided without unduly constraining historic participants.

#### **4.5 Objectives of Proposed Action and its Legal Basis**

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

Two principal objectives of the FMP amendment and proposed regulations are to limit access to the BSAI TLAS yellowfin sole fishery to mitigate the risk of a “race for fish” for the offshore CV sector and provide fishing opportunities for other CVs when sufficient BSAI yellowfin sole TAC is available.

#### **4.6 Number and Description of Directly Regulated Small Entities**

This section provides estimates of the number of harvesting vessels that are considered small entities. These estimates may overstate the number of small entities (and conversely, understate the number of large entities). The RFA requires a consideration of affiliations between entities for the purpose of assessing if an entity is small. The estimates do not take into account all affiliations between entities. There is not a strict one-to-one correlation between vessels and entities; many persons and firms are known to have ownership interests in more than one vessel, and many of these vessels with different ownership, are otherwise affiliated with each other.

The entities directly regulated by this action are those entities that participate in harvesting groundfish from the Federal or parallel BSAI TLAS yellowfin sole fishery.

From 2008 through 2016, there is one CV that is considered a small entity that would be directly regulated by the proposed action. Fishing vessels are considered small entities if their total annual gross receipts, from all their activities, and those of all affiliates combined, are less than \$20.5 million. There were seven CVs that fished in BSAI TLAS yellowfin sole fishery during 2008 through 2016 that are considered large entities.

#### **4.7 Recordkeeping, Reporting, and Other Compliance Requirements**

Recordkeeping and reporting requirements are not expected to change as a result of the proposed action. The action under consideration requires no additional reporting or recordkeeping requirements different from the status quo.

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

An IRFA is required to identify whether relevant Federal rules have been identified that would duplicate or overlap with the proposed action. This section will be completed once the Council has identified a preferred alternative.

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

An IRFA also requires a description of any significant alternatives to the proposed action(s) that accomplish the stated objectives, are consistent with applicable statutes, and that would minimize any significant economic impact of the proposed rule on small entities. This section will be completed once the Council has identified a preferred alternative.



## 5 Magnuson-Stevens Act and FMP Considerations

### 5.1 Magnuson-Stevens Act National Standards

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

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

None of the alternatives considered in this action would affect overfishing of BSAI yellowfin sole in the TLAS fishery. The BSAI yellowfin sole ABC and TAC, and the processes by which the TLAS fishery is managed to stay within its allocation, will not change because of Alternative 2.

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

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

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

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

**National Standard 4** — Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various 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.

The excessive share provisions of National Standard 4 requires an allocation to be designed to deter any person or other entity from acquiring an excessive share of fishing privileges. Alternative 2 is intended to mitigate the risk that a “race for fish” could develop, and help to maintain the consistently low rates of halibut bycatch in this fishery. Historically, the AFA CPs and non-AFA CVs that deliver to CPs acting as motherships have harvested the BSAI TLAS yellowfin sole fishery. Alternative 2 would not limit eligibility for AFA CPs in this fishery or CVs harvesting BSAI TLAS yellowfin sole for delivery to shoreplants. Since 2008, the number of CVs has ranged from a low of zero in 2010 to a high of nine in 2016. In total, there were 10 unique CVs that participated in the BSAI yellowfin sole fishery from 2008 through 2016 at least one year. Options under consideration could limit the number of CVs eligible to target BSAI TLAS yellowfin sole from a low of 3 CVs owned by one company to high of 10 CVs owned by 7 companies. Of the CVs that qualify under Suboption 1.1.1 and Suboption 1.1.2, the portion of total gross revenue from BSAI TLAS yellowfin sole differed significantly between the qualifying vessels. Specifically, the three CVs that qualify under Suboption 1.1.2 had a much higher portion of their total gross revenue from the BSAI TLAS yellowfin sole fishery than the five CVs that did not qualify for

Suboption 1.1.2. However, one of the five CVs that did not qualify under Suboption 1.1.2 had a significant portion of their total gross revenue come from the BSAI TLAS yellowfin sole fishery.

As noted in Table 2-11 and Table 2-12, all qualifying CVs in Option 1.1 (vessel 1 through vessel 8) also participated in other fisheries in addition to the BSAI TLAS yellowfin sole fishery. Other fisheries included BSAI Pacific cod, BSAI pollock, BSAI TLAS Atka mackerel and AI TLAS Pacific Ocean perch, BSAI MRA rock sole, GOA pollock, GOA Pacific cod, and other GOA groundfish fisheries. The three CVs that qualify for Suboption 1.1.2 had a significant portion of their total gross revenue from BSAI Pacific cod and other BSAI groundfish fisheries which included TLAS Atka mackerel and TLAS Pacific Ocean perch, while the total gross revenue for the five additional CVs that qualify under Suboption 1.1.1 varied. One CV had revenue from BSAI TLAS Atka mackerel, BSAI Pacific cod, and BSAI MRA rock sole. Another two CVs had a significant portion of their total gross revenue from BS pollock and BS Pacific cod, while the remaining two CVs had total gross revenue mostly from the BSAI Pacific cod fishery.

Table 2-20As noted in Table 2-11 and Table 2-12 qualifying CVs in Option 1.1 and Option 2.1 (vessel 1 through vessel 10) also participated in other fisheries in addition to the BSAI TLAS yellowfin sole fishery. Other fisheries that contributed to total gross revenue for the qualified vessels included BSAI Pacific cod, BSAI pollock, BSAI Atka mackerel, AI Pacific ocean perch, BSAI rock sole, BSAI flathead sole, and other BSAI groundfish.

As noted in Table 2-20, Suboption 1.1.2 would limit the number of qualified CVs to three, all owned by one company. Since one company currently owns the three eligible CVs under Suboption 1.1.2, selection of this suboption could be interpreted as potentially providing excessive share of fishing for the BSAI TLAS yellowfin sole offshore CV fishery. However, because the proposed action would only limit access for the offshore CV sector of the BSAI TLAS yellowfin sole fishery and not AFA CPs, the Council should also consider the potential for allocation of an excessive share of harvesting privileges under Suboption 1.1.2 with respect to the BSAI TLAS yellowfin sole fishery as a whole. The Council should also consider the excessive share provision of National Standard 4 under Options 2.1 and 2.2. Under these options, the BSAI yellowfin sole TLAS fishery would be open for all CVs when the BSAI TLAS yellowfin sole TAC is above a specified level, which could provide opportunities for new entrants without unduly constraining historic participants.

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

The proposed action would limit offshore CVs in the BSAI TLAS yellowfin sole fishery to mitigate the risk that a “race for fish” that could develop thereby reducing efficiency of BSAI TLAS yellowfin sole fishery resources. The benefit of an offshore CV limitation is balanced, to some degree, by options that provide opportunities for new entrants to the fishery when BSAI TLAS yellowfin sole allocation is sufficient to not unduly constrain historic participants by these new entrants.

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

None of the proposed alternatives are expected to affect the availability of and variability in the BSAI TLAS yellowfin sole fishery resource in future years. The harvest would be managed to and limited by the TAC, regardless of the proposed action considered in this amendment.

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

The proposed action does not duplicate any other management action.

**National Standard 8** — Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities 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.

This action is not expected to have adverse impacts on communities or affect community sustainability. None of the action alternatives would extinguish harvest opportunities for CVs targeting BSAI TLAS yellowfin sole for deliver to shore plants located in BS or AI communities. The proposed action would limit offshore CVs only.

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

The proposed action through potential voluntary cooperative management of the BSAI TLAS yellowfin sole fishery amongst eligible CVs could reduce halibut PSC apportioned to the BSAI TLAS yellowfin sole fishery. Potential factors inhibiting voluntary cooperative management and thus reduction of halibut PSC in the BSAI TLAS yellowfin sole fishery is the ability of the CPs to harvest a significant portion of the BSAI TLAS yellowfin sole fishery, and the option to remove the CV eligibility during periods of high TAC.

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

The alternatives proposed should have no significant effect on safety at sea.

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

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

The RIR/EA/IRFA prepared for this plan amendment constitutes the fishery impact statement. The likely effects of the proposed action are analyzed and described throughout the RIR/EA/IRFA. The effects on participants in the fisheries and fishing communities are analyzed in the RIR/IRFA chapters of the analysis (Chapters 2 and 4). The effects of the proposed action on safety of human life at sea are evaluated under National Standard 10, in Section 5.1. Based on the information reported in this section, there is no need to update the Fishery Impact Statement included in the FMP.

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

### **5.3 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. This action limits access for offshore CVs in the BSAI TLAS yellowfin sole fishery. This action directly supports the Council's intention to protect historic participants, mitigate the risk of a "race for fish," and help maintain consistently low rates of halibut PSC in the fishery.

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