INITIAL 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 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 yellowfin sole for delivery of the catch to a mothership or catcher processor. The management measures under consideration include an option to remove the limited access provisions for all trawl catcher vessels during periods of high total allowable catch assigned to the BSAI trawl limited access yellowfin sole fishery.

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	*Federal Register*
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	tonne, or metric ton
NAICS	North American Industry Classification System
NAO	NOAA Administrative Order
NEPA	National Environmental Policy Act
NMFS	National Marine Fishery Service

NOAA	National Oceanic and Atmospheric Administration
NPAFC	North Pacific Anadromous Fish Commission
NPFMC	North Pacific Fishery Management Council
NPPSD	North Pacific Pelagic Seabird Database
Observer Program	North Pacific Groundfish and Halibut Observer Program
OMB	Office of Management and Budget
PBR	potential biological removal
PSC	prohibited species catch
PPA	Preliminary preferred alternative
PRA	Paperwork Reduction Act
PSEIS	Programmatic Supplemental Environmental Impact Statement
RFA	Regulatory Flexibility Act
RFFA	reasonably foreseeable future action
RIR	Regulatory Impact Review
RPA	reasonable and prudent alternative
SAFE	Stock Assessment and Fishery Evaluation
SAR	stock assessment report
SBA	Small Business Act
Secretary	Secretary of Commerce
TAC	total allowable catch
TLA	Trawl limited access
U.S.	United States
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
W	West
YFS	Yellowfin sole

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Executive Summary

This document analyzes proposed management measures that would limit access for trawl catcher vessels targeting Bering Sea and Aleutian Islands (BSAI) trawl limited access (TLA) yellowfin sole for delivery of the catch to a mothership or catcher processor. The management measures under consideration include an option to remove the limited access provision for all trawl catcher vessels during periods of high total allowable catch (TAC) assigned to the BSAI trawl yellowfin sole trawl limited access fishery.

Purpose and Need

The Amendment 80 program assigns a portion of the BSAI yellowfin sole total allowable catch (TAC) to a TLA fishery. Amendment 80 catcher processors (CPs) are precluded from fishing in the TLA fishery, however they are not prohibited from acting as a mothership for catcher vessels (CVs) in this fishery. Since the implementation of the TLA fishery in 2008, American Fisheries Act (AFA) and Non-AFA CVs, AFA CPs, floating processors, and Amendment 80 motherships have participated in the TLA fishery. In 2015, vessels entered the TLA 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 TLA fishery.

The Council has recognized the concern of historic participants in the TLA 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 TLA fishery. Limiting access may help ensure that the TLA 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 TLA 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 directed fish in 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 directed fishery landing in the yellowfin sole limited access fishery made to a mothership or catcher/processor between 2008 – 2015.

Suboption 2.1: in any year
Suboption 2.2: in any two years

Option 2.1: The limits on access to catcher vessels are relieved 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

Regulatory Impact Review

Alternative 1: No Action

The BSAI TLA 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. In total, there were 13 unique CPs that participated in the BSAI yellowfin sole fishery from 2003 through 2016. All participating CPs are AFA vessels. From a harvesting perspective, CPs have been a major contributor of BSAI TLA yellowfin sole. Under the status quo alternative, AFA CPs will likely continue to participate in the BSAI TLA yellowfin sole fishery. Their participation levels in the BSAI TLA yellowfin sole fishery will, in some degree, likely depend on the BSAI pollock fishery ITAC levels.

As for CVs, there were 17 unique CVs that participated in the BSAI yellowfin sole fishery from 2003 through 2016. In recent years, the number of CVs participating in the BSAI TLA yellowfin sole fishery has increased. In 2015, six CVs participated, while in 2016, nine participated. In general, CVs will likely continue to participate in the BSAI TLA yellowfin sole fishery under the status quo alternative in numbers comparable to 2015 and 2016 if there is an economic value in the fishery relative to other fishery opportunities.

Another group of vessels that participate in the offshore yellowfin sole fishery are CPs acting as a mothership and floaters. Since implementation of the BSAI TLA yellowfin sole fishery in 2008, the number of participating motherships has generally been limited ranging from zero in 2010 to six in 2016. 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 6 motherships. Overall, motherships will likely continue to participate in the BSAI TLA yellowfin sole fishery at levels seen in 2015 and 2016 under the status quo alternative as long the economic returns from this fishery are perceived higher relative to other fishing opportunities.

Alternative 2: Limited Access

Under Suboption 2.1, eight CVs owned by five companies would qualify since they are credit with one targeted landing in the yellowfin sole TLA to a mothership or CP in any one year from 2008 through 2015. Under Suboption 2.2, three CVs owned by one company would qualify to participate in the BSAI TLA yellowfin sole fishery.

One of the potential benefits of Suboption 2.1 or Suboption 2.2 is it could help reduce the race for BSAI yellowfin sole in the TLA fishery as well as the reduce halibut PSC in the BSAI TLA yellowfin sole fishery through voluntary cooperative agreements between eligible CVs and the AFA CPs. By limiting the total number of CVs that can target BSAI TLA yellowfin sole for delivery to offshore processors, new CVs cannot entry the offshore fishery, which makes cooperative management easier to achieve. Between the two suboptions, Suboption 2.1 has less potential for cooperative management relative to Suboption 2.2 since there are eight qualified CVs and therefore more companies to agree to a cooperative agreement.

Although the proposed action alternative does not directly prohibit mothership activity in the BSAI TLA 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 TLA yellowfin sole to motherships. Although both suboptions would limit mothership opportunities relative to status quo, Suboption 2.2 would be more limiting than Suboption 2.1.

Selection of Suboption 2.2 could also reduce production efficiencies amongst BSAI TLA yellowfin soles motherships that also operator as CPs in the Amendment 80 yellowfin sole fishery. Processing both TLA 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 TLA 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, under the right conditions, to high of a trigger for removing the CV restriction could leave a portion of the BSAI TLA yellowfin sole allocation unharvested. However, selecting too low of a BSAI yellowfin sole allocation for removing CV restrictions could increase the risk of a race for fish, which would negatively impact historic participants.

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 component potentially affected as a result of the proposed action is the human environment, which may have socioeconomic impacts to fishery participants. 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. Given the limited scope of this proposed action, the human environment in the BSAI management area is the only potential environmental component included in the EA.

1 Introduction

This document analyzes proposed management measures that would limit access for trawl catcher vessels targeting Bering Sea and Aleutian Islands (BSAI) trawl limited access (TLA) yellowfin sole for delivery of the catch to a mothership or catcher processor. The management measures under consideration include an option to remove the limited access provisions for all trawl catcher vessels during periods of high total allowable catch (TAC) assigned to the BSAI trawl limited access 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 catcher vessels targeting BSAI TLA 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

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

The Council has recognized the concern of historic participants in the TLA 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 TLA fishery. Limiting access may help ensure that the TLA 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 TLA fishery is relatively high, opportunities for new entrants could be provided without unduly constraining historic participants.

2.3 History of this Action

In October 2015, the Council received public testimony from a few participants in the offshore sector of the BSAI TLA 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 TLA 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 TLA 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 catcher vessels that participate in the inshore sector of the yellowfin sole BSAI TLA 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.

In February 2016, the Council reviewed a discussion paper that examined participation and effort in the BSAI TLA 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 catcher vessels in the offshore portion of the BSAI TLA yellowfin sole fishery. Limiting access for catcher vessels 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 TLA fishery is relatively high, opportunities for new entrants could be provided without unduly constraining historic participants.

2.4 Alternatives

Alternative 1: No Action-Status Quo

Alternative 2: A catcher vessel may directed fish in 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 directed fishery landing in the yellowfin sole limited access fishery made to a mothership or catcher/processor between 2008 – 2015.

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Suboption 2.1.2: 20,000 mt
Suboption 2.1.3: 25,000 mt

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.

Currently Alternative 2 language limits access to the BSAI TLA yellowfin sole fishery based on 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 TLA yellowfin sole fishery based on directed fishing activity could result in offshore CVs qualifying based on incidental catch of yellowfin sole. Another approach for determining eligibility in a limited access fishery would be to use trip target. 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 TLA yellowfin sole fishery based on their incidental catch of yellowfin sole. Eligibility for previous limited access programs were based on trip target rather than directed fishing activity. Recognizing that eligibility for existing limited access programs is based on trip target rather than directed fishing activity, this analysis relies on trip target for determining eligibility. **If this assumption is correct, the Council should revise Alternative 2 to base the qualification on definition of trip target rather than directed fishing activity.**

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 TLA 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 these TLA fisheries (NPFMC, 2007). The Council's intent of establishing the TLA fisheries was to provide harvesting opportunities for American Fisheries Act (AFA) catcher processors (CPs), AFA catcher vessels (CVs), and non-AFA CVs.

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 TLA sector fisheries.

Unlike other TLAs fisheries, the Council used a different approach in determining the Amendment 80 allocation and the TLA allocation for yellowfin sole. The proportion of yellowfin sole ITAC allocated between the Amendment 80 and BSAI TLA sectors fluctuates with the yellowfin sole TAC. Presented

below is the BSAI yellowfin sole allocation calculation between the Amendment 80 sector and the BSAI TLA fishery.

ITAC	Allocation
0 - 87,499	93%
87,500 - 94,999	87.5%
95,000 - 102,499	82%
102,500 - 109,999	76.5%
110,000 - 117,499	71%
117,500 - 124,999	65.5%
125,000 and greater	60%

Table 2-1 provides historical acceptable biological catch (ABC), TAC, ITAC, Amendment 80 and BSAI TLA allocations for BSAI yellowfin sole, 2003 through 2015.

Table 2-1 BSAI yellowfin sole ABC (mt), TAC (mt), ITAC (mt), AM80 (mt) and TLA (mt) allocations, 2003 through 2016

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	248,800	144,000	127,592	110,113	14,979

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

The intent of the fluctuating yellowfin sole allocations between the Amendment 80 and BSAI TLA sectors was to better accommodate major shifts in the yellowfin sole trawl fisheries during periods of high ITAC. In addition, this approach was thought to provide harvesting opportunities for some trawl sectors, while also maintaining some consistency in the historical catch in other trawl sectors (NPFMC, 2007). Looking at the years considered when the Council was deliberating on Amendment 80 and the BSAI TLA 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 participates in the BSAI yellowfin sole fishery during the 1995 to 2004 years.

To help facilitate the BSAI TLA 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 2-2 provides the yellowfin sole sideboard limits for AFA CVs and CPs from 2003 through 2016. 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 2-2 Yellowfin sole sideboard limits for AFA CVs and CPs from 2003 through 2016

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

Source: NMFS Final Specifications

2.6.1.1 Description of the BSAI TLA Yellowfin Sole Fishery

This section of the analysis examines the offshore participation and effort in the yellowfin sole BSAI TLA fishery. Vessels that participate in the offshore sector of the BSAI TLA 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 catcher vessels. Motherships participate in the offshore sector by receiving and processing deliveries of yellowfin sole from catcher vessels.

Table 2-3 provides data on BSAI TLA yellowfin sole catch in relation to yellowfin sole ITAC and BSAI TLA allocation from 2003 through 2016. Prior to implementation of the BSAI TLA 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 TLA 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 TLA yellowfin sole allocation to the Amendment 80 sector (see Table 2-10 for reapportionments and dates). Starting in the 2013, the BSAI TLA yellowfin sole

fishery was a fully utilized fishery. In 2013, 99% of the BSAI TLA yellowfin sole allocation was harvested. In 2014, 93% of the BSAI TLA yellowfin sole allocation was harvested, while in 2015 and 2016, the percent of allocation harvested was 99% and 98%, respectively. Table 2-3 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 TLA Pacific cod fishery. BSAI yellowfin sole incidental catch is accommodated by the ICA, which in 2016 was 3,500 mt.

Table 2-3 Yellowfin sole ITAC, BSAI TLA allocation, and target and incidental catch of yellowfin sole BSAI TLA (2003 through 2016)

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[2] & 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^	200,925	32,512	16	20,017	62	10	1,017
2009^	187,530	33,154	18	10,181	31	5	2,506
2010^	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

Source: NMFS Final Specifications

Source file: BSAI_Yellowfin(7-18)

[1]ITAC = TAC - CDQ

[2]Catch of BSAI YFS target catch by AM80 vessels has been removed from BSAI YFS target catch (2003-2007)

^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

2.6.1.2 Halibut PSC in the BSAI TLA Yellowfin Sole Fishery

As part of the Amendment 80 program, halibut PSC limit is allocated to the Amendment 80 sector and the BSAI TLA fisheries (see Table 2-4). 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 TLA fisheries will be 745 mt. Of the 745 mt halibut PSC apportioned to the BSAI TLA fisheries during 2016, 150 mt will be reserved for the yellowfin sole fishery. Table 2-4 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 TLA groundfish fisheries, BSAI TLA yellowfin sole fishery, and the Amendment 80 sector from 2008 through 2016.

Table 2-4 Halibut PSC limit for yellowfin sole trawl fishery (2003 through 2007), and all BSAI TLA fisheries, BSAI TLA yellowfin sole fishery, and Amendment 80 fisheries (2008 through 2016)

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

Source: NMFS Final Specifications

TLA = trawl limited access

YFS = yellowfin 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 TLA fisheries to the Amendment 80 sector if Regional Administrator determines it is appropriate. For the BSAI TLA fisheries, there are no regulations that authorize the reallocation of halibut PSC limit between fisheries. For halibut PSC to be reallocated between BSAI TLA fisheries, the Regional Administrator, after determining some portion of halibut PSC in a BSAI TLA 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 TLA 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 TLA Pacific cod fishery to the BSAI TLA yellowfin sole fishery. This action was necessary to provide opportunity for harvest of the 2014 BSAI TLA yellowfin sole allocation by participating vessels. Table 2-10 provides details on the annual reallocations of halibut PSC limits.

2.6.2 Target Products and Markets

Table 2-5 provides production information and wholesale prices for the BSAI TLA yellowfin sole fishery from 2003 through 2015. The primary products produced from the BSAI yellowfin sole fishery are headed and gutted (78 percent) and frozen whole fish (21 percent). 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 retain and foodservice operators in Europe, Japan, and the U.S. (AFSC, 2016).

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 2-5 Production and wholesale prices for BSAI TLA 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)

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 catcher vessels targeting BSAI yellow fin sole TLA. The impetus for the proposed action by the Council originated from concern by historical participants in the BSAI TLA 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 TLA 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 TLA 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 catcher vessels targeting BSAI TLA yellowfin sole for delivery of the catch to a mothership or catcher processor. Under this alternative, catcher vessels that are active in the BSAI TLA 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 TLA yellowfin sole fishery

The BSAI TLA 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. Table 2-6 provides vessel counts for each group. Apart from 2015 and 2016, catch by year for each vessel sector is confidential and could not be provided due to the limited number of motherships participating in the fishery on an annual basis.

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 TLA yellowfin sole fishery in 2008, the number of CPs has ranged 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 2016. All participating CPs are AFA vessels. Table 2-7 provides annual participation of these CPs from 2003 through 2016. All 13 CPs participated at least once in the BSAI TLA yellowfin sole fishery (2008-2016), while only 1 CP has participated in the fishery every year since 2003.

From a harvesting perspective, CPs have been a major contributor of BSAI TLA yellowfin sole catch. In fact, up to 2015, CPs harvested 85% of the BSAI TLA yellowfin sole catch. However, since 2015, the CP sector's percent of the BSAI TLA yellowfin catch has diminished to an average of 54%. As noted in Table 2-6, in 2015, 7 CPs harvested 8,875 mt of yellowfin sole in the BSAI TLA fishery, which is 55% of the BSAI TLA allocation. In 2016, 5 CPs harvested 7,697 mt of yellowfin sole in the BSAI TLA fishery, which is 51% of the BSAI TLA allocation.

Weekly catch of BSAI TLA yellowfin sole for the CPs from 2008 through 2016 has also changed. During the first three years of the BSAI TLA 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 TLA 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 TLA 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 TLA 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 TLA yellowfin sole fishery, the CP vessels fishing all year, in general, harvested a larger share of the total CP harvest of BSAI TLA yellowfin sole.

Given that participating AFA CPs focus is primarily the BS pollock fishery, Table 2-6 includes annual BS pollock ITAC. As seen in Table 2-6 and Figure 2-1, the number of participating AFA CPs in the BSAI TLA 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 TLA 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 TLA yellowfin sole fishery. Their participation levels in the BSAI TLA yellowfin sole fishery will, in some degree, likely depend on the BSAI pollock fishery ITAC levels. During periods of low BS pollock ITAC the CPs could have greater levels of participation in the BSAI TLA yellowfin sole fishery, while participation in the BSAI TLA yellowfin sole fishery could diminish during periods of high BS pollock ITAC.

Table 2-6 Vessel count and catch for BSAI TLA yellowfin sole fishery, 2003 through 2016

Year	BS Pollock ITAC[1] (mt)	BSAI YFS ITAC[1] (mt)	BSAI TLA YFS allocation (mt)	Offshore activity						
				CP		CV				
				Vessel count	Harvest BSAI YFS from 2003-2007[2] and BSAI TLA YFS from 2008-2015 (mt)	Total CV count (deliverying to motherships)	AFA CV count	Harvest BSAI YFS from 2003-2007[2] and BSAI TLA YFS from 2008-2015 (mt)	Mothership vessel count in the BSAI TLA YFS fishery	BSAI YFS target catch from 2003-2007[2] & BSAI TLA YFS target catch from 2008-2015 (mt)
2003	1,342,584	71,188		3	*	0	0	*	0	4,461
2004	1,342,800	73,164		5	*	2	1	*	2	4,386
2005	1,330,650	77,083	N/A	5	*	1	0	*	1	7,995
2006	1,336,500	81,346		7	*	4	3	*	2	13,361
2007	1,254,600	115,600		9	*	3	1	*	2	22,214
2008^	900,000	200,925	32,512	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	7,697	9	4	7,011	6	14,708

Source file: BSAI_Yellowfin(7-15)-1

*Denotes confidential data

[1]ITAC = TAC - CDQ

[2]Catch of BSAI YFS target catch by AM80 vessels has been removed from BSAI YFS target catch (2003-2007)

^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

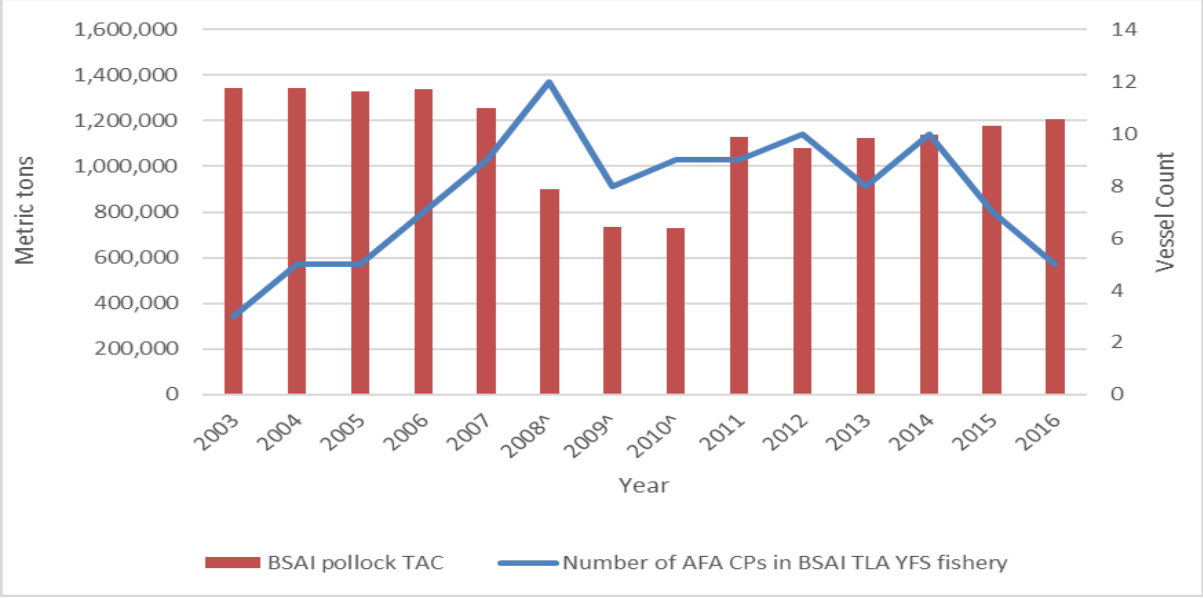


Figure 2-1 Vessel count of CPs participating in the BSAI TLA yellowfin sole fishery and BSAI pollock TAC (mt) from 2003 through 2016

Table 2-7 Years catcher processors participated in the BSAI yellowfin sole fishery (2003-2007) and the BSAI TLA yellowfin sole fishery (2008 through 2016)

Catcher processor	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total of years active
Vessel 1	X					X									2
Vessel 2	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	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	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	9	10	7	5	

Source file: BSAI_Yellowfin(12-28)

As for trawl CV participation in the BSAI yellowfin sole fishery and BSAI TLA 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 TLA 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 17 unique CVs that participated in the BSAI yellowfin sole fishery from 2003 through 2016. Of these 17 CVs, six were AFA vessels. As noted in Table 2-8, 10 CVs participated in the BSAI TLA yellowfin sole fishery (2008-2016) at least one year. Of these 10 CVs that participated in the yellowfin sole BSAI TLA fishery, four vessels had five or more years in that fishery.

Weekly harvest patterns for CVs in the BSAI TLA yellowfin sole fishery has also changed over the eight years. During the 2008 fishing season, the CVs participated in the BSAI TLA yellowfin sole fishery from March until December. During the next two years, the CVs participated in the BSAI TLA yellowfin sole fishery for a few weeks in April and a few weeks in September and October. Starting in 2012, CVs generally participated until the fishery was closed to directed fishing.

In recent years, the number of CVs participating in the BSAI TLA yellowfin sole fishery has more than doubled. In 2015, six CVs harvested 7,202 mt of yellowfin sole in the BSAI TLA fishery, which is 45 percent of the BSAI TLA yellowfin sole allocation, and is significantly higher than the sector's average annual percent of total BSAI TLA yellowfin sole catch of 17 percent 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 TLA fishery, which was 48 percent of the BSAI TLA yellowfin sole allocation. Of those nine vessels, one was a new entrant to the fishery and two vessels reentered the fishery, last participating in 2004 and 2008, respectively. In general, CVs will likely continue to participate in the BSAI TLA yellowfin sole fishery under the status quo alternative in numbers comparable to 2015 and 2016 if there is an economic value in the fishery relative to other fishery opportunities.

Table 2-8 Years catcher vessels delivering to motherships participated in the BSAI yellowfin sole fishery (2003-2007) and the BSAI TLA yellowfin sole fishery (2008-2016)

Catcher vessel	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total of years active
Vessel 1		X	X	X	X	X								X	6
Vessel 2		X												X	2
Vessel 3				X											1
Vessel 4				X											1
Vessel 5				X											1
Vessel 6					X										1
Vessel 7					X										1
Vessel 8						X									1
Vessel 11						X	X		X	X	X	X	X	X	8
Vessel 12										X	X	X	X	X	5
Vessel 13									X	X	X	X	X	X	6
Vessel 14													X	X	2
Vessel 15													X	X	2
Vessel 16													X	X	2
Vessel 17														X	1
Annual total	0	2	1	4	3	3	1	0	2	3	3	3	6	9	

Source file: BSAI_Yellowfin(7-15)-1

Another group of vessels that participate in the offshore yellowfin sole fishery are CPs acting as a mothership and floaters. 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 TLA yellowfin sole fishery by this group of vessels can be characterized as limited (see Table 2-9). Prior to implementation of the BSAI TLA yellowfin sole fishery in 2008, only 3 motherships participated in the fishery, of which two were floaters. After implementation of the BSAI TLA yellowfin sole fishery in 2008, the number of participating vessels was generally limited to motherships and ranged from 0 in 2010 to 6 in 2016. In general, though, only 1 mothership participated in the fishery prior to 2015. Starting in 2015, the number of participating motherships expanded to include 4 new entrants for a total 5 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 6 motherships. This expansion in the number of motherships in the BSAI TLA yellowfin sole fishery provided increased opportunity for CV deliveries, which is reflective in the increased number of CVs that participated in 2015 and 2016 (see Table 2-8) and the higher proportion of BSAI TLA yellowfin sole harvested by the CV sector in 2015 and 2016 relative to previous years.

One reason for the recent expansion in mothership activity in the BSAI TLA 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. Weekly production data shows that all five motherships that processed BSAI TLA yellowfin sole deliveries also harvested and processed Amendment 80 yellowfin sole allocation in 2015. By processing both BSAI TLA 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. For this reason, motherships will likely continue to participate in the BSAI TLA yellowfin sole fishery at levels seen in 2015 and 2016 under the status quo alternative as long the economic returns from this fishery are perceived higher relative to other fishing opportunities.

Table 2-9 Years mothership vessels participated in the BSAI yellowfin sole fishery (2003-2007) and the BSAI TLA yellowfin sole fishery (2008-2016)

Mothership	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	Total of years active
Vessel 1		X													1
Vessel 2		X	X	X	X	X	X		X	X	X	X	X	X	12
Vessel 3				X	X	X									3
Vessel 4													X	X	2
Vessel 5													X	X	2
Vessel 6													X	X	2
Vessel 7													X	X	2
Vessel 8														X	1
Annual total	0	2	1	2	2	2	1	0	1	1	1	1	5	6	

Source file: BSAI_Yellowfin(12-28)

2.7.1.2 Halibut PSC mortality in BSAI TLA yellowfin sole fishery

As with other "race for fish" fisheries, the halibut PSC limit has the potential to close the BSAI TLA 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, thus a 'race for fish" is possible.

Table 2-10 provides fishery closure dates for the BSAI yellowfin sole fishery (for both Amendment 80 and BSAI TLA from 2008 through 2016) and fishery closure dates for the yellowfin sole trawl fishery (from 2003 through 2007). As noted in the table, the yellowfin sole BSAI TLA 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 reapportion from the BSAI TLA Pacific cod and pollock fisheries to the BSAI TLA yellowfin sole fishery, which allowed the BSAI TLA yellowfin sole fishery to open on June 20, and remain open for the rest of 2014. In 2016, the BSAI TLA yellowfin sole fishery closed on June 8 because the fleet harvested the BSAI TLA yellowfin sole TAC.

Table 2-10 Status of the BSAI yellowfin sole fishery from 2003 through 2016

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						
	Apportionment from reserve	401 mt	30-Dec						
2006	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						
	Closed	TAC	7-Aug						
2007	Closed-trawl	Halibut	18-Apr						
	Closed-trawl	Halibut	7-Jun						
	Closed-trawl	Halibut	3-Aug						
2008	N/A			No TAC or halibut closures for Yellowfin Sole			Closed AM80 LAF	Halibut	16-May
							osed AM80 LAF bycatch limitation zone	Red king crab	21-May
							Reallocation from TLA to AM80	6,000 mt	20-Oct
							Closed AM80 LAF	Halibut	20-Nov
2009				Reallocation from TLA to AM80	6,000 mt	2-Oct	Reallocation from TLA to AM80	6,000 mt	2-Oct
2010				Reallocation from TLA to AM80	20,000 mt	8-Sep	Reallocation from TLA to AM80	20,000 mt	8-Sep
2011				Reallocation from TLA to AM80	2,000 mt	5-Oct	Reallocation from TLA to AM80	2,000 mt	5-Oct
2012				No TAC or halibut closures for Yellowfin Sole			No TAC or halibut closures for Yellowfin Sole		
2013				Closed	TAC	9-Nov	No TAC or halibut closures for Yellowfin Sole		
2014				Closed	Halibut	15-May	No TAC or halibut closures for Yellowfin Sole		
				Reapportionment halibut PSC from BSAI TLA Pcod	60 mt	18-Jun			
				Open	ufficient halibut PS(	20-Jun			
2015				Closed	TAC	10-Nov	No TAC or halibut closures for Yellowfin Sole		
2016				Closed	TAC	8-Jun	No TAC or halibut closures for Yellowfin Sole		

Source: NMFS Final Specifications

TLA = trawl limited access

LAF = AM80 limited access fishery

As seen in Table 2-11, there is a direct relationship between halibut mortality in the BSAI TLA yellowfin sole fishery and the harvest of BSAI TLA yellowfin sole. As the harvest of BSAI TLA yellowfin sole increases, so does halibut mortality. For example, in 2013, harvest of BSAI TLA 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 TLA yellowfin sole fishery exceeded the halibut PSC limit by 18 mt. In 2014, over 27,000 mt of BSAI TLA 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 TLA Pacific cod fishery to the BSAI TLA yellowfin sole fishery, which allowed NMFS to reopen the BSAI TLA yellowfin sole fishery.

In contrast to those years of high BSAI TLA yellowfin sole harvest and halibut mortality, 2009 saw only 95 mt of halibut mortality for 10,181 mt of BSAI TLA yellowfin sole harvested. In another example, 2015 saw 122 mt of halibut mortality for a harvest of over 16,000 mt of BSAI TLA 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 TLA 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 2-11 and Figure 2-2 provide the annual halibut rate for the BSAI TLA yellowfin sole fishery (kilogram of halibut mortality in the BSAI TLA yellowfin sole fishery divided by catch of groundfish in the BSAI TLA yellowfin sole fishery) from 2008 through 2016. The table and figure also provide annual halibut rates for all yellowfin sole in the BSAI, and Pacific cod, rock sole, and flathead sole fisheries in the BSAI. As noted in the table and figure, the annual halibut rate has increased slightly every year since 2010. During that year, the halibut rate for the BSAI TLA yellowfin sole fishery was 1.1, 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 TLA yellowfin sole fishery. Some groundfish fisheries with high halibut rates were rock sole between 2008 through 2010 and flathead sole in 2012.

Table 2-11 Halibut PSC limit, halibut mortality, and halibut mortality rate for the BSAI TLA yellowfin sole fishery and other BSAI groundfish fisheries from 2008 through 2016

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**	All yellowfin sole	Pacific cod	Rock sole	Flathead sole
2008	20,017	241	158	83	5.8213	5.68	8.25	10.21	8.28
2009	10,181	162	95	67	6.5533	6.93	7.04	11.69	9.32
2010	19,421	187	27	160	1.1115	5.84	7.92	12.61	8.59
2011	25,485	167	81	86	2.3276	4.87	5.82	7.23	9.14
2012	28,140	167	142	25	3.5656	5.19	9.17	4.85	13.79
2013	34,606	167	185	-18	3.6115	5.66	6.91	8.26	8.86
2014*	27,720	227	194	33	4.8133	6.76	6.27	9.18	5.71
2015	16,073	167	122	45	4.9810	4.80	7.18	7.80	3.74
2016	14,708	150	124	26	6.2887	4.30	5.95	6.29	4.18

Source file: BSAI_Yellowfin(7-15)-1, BSAI_PSC(9-16), and NMFS Final Specifications

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

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

TLA = trawl limited access

YFS = yellowfin sole

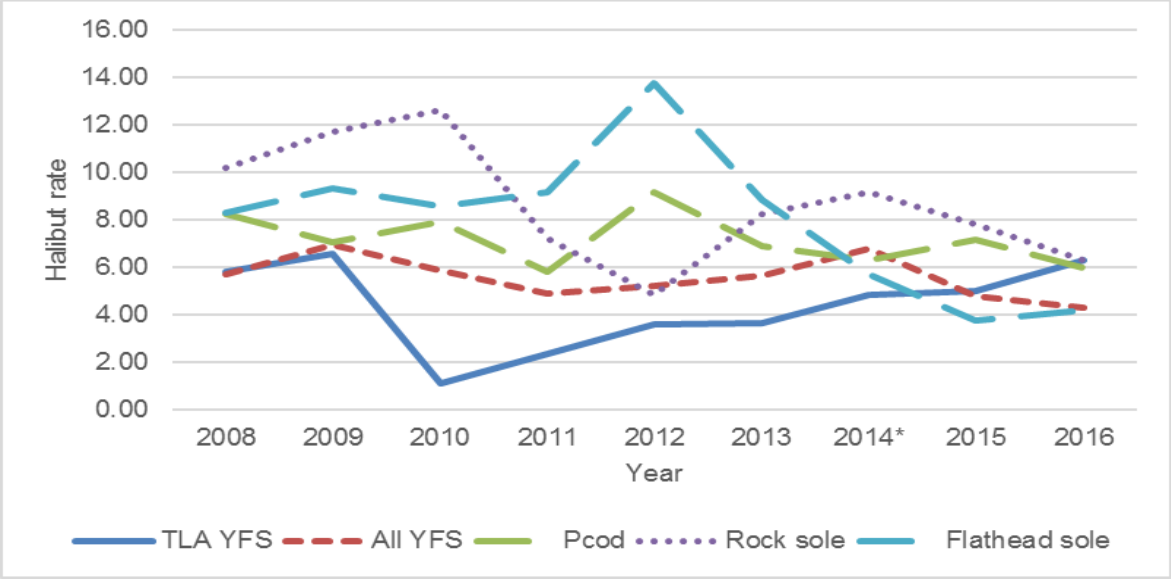


Figure 2-2 Annual halibut mortality rate in the BSAI TLA yellowfin sole fishery relative to other BSAI groundfish fisheries from 2008 through 2016

Table 2-12 disaggregates halibut mortality in the BSAI TLA yellowfin sole fishery by vessel operation. Except for 2015 and 2016, 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. For the two years halibut mortality could be shown, the CP sector caught 54 mt in 2015 and 47 in 2016, which was 44% and 38% of the halibut PSC limit for the BSAI TLA yellowfin sole fishery. The CV sector caught 68 mt in 2015 and 77 mt in 2016, which was 56% and 62% of the BSAI TLA yellowfin sole PSC limit.

Table 2-12 Halibut mortality by vessel operator in the BSAI TLA yellowfin sole fishery, 2003 through 2016

Year	YFS trawl (mt)	BSAI TLA YFS halibut PSC limit (mt)	CP		CV		Total halibut mortality (mt)
			Halibut mortality (mt)	% of total halibut mortality	Halibut mortality (mt)	% of total halibut mortality	
2003	886		*	*	*	*	2
2004	886		*	*	*	*	4
2005	886	NA	*	*	*	*	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	54	44	68	56	122
2016		150	47	38	77	62	124

Source file: BSAI_Yellow fin(7-15)-1and NMFS Final Specifications

*Confidential data

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

TLA = traw l 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 TLA 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 TLA 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 by the BSAI TLA yellowfin sole fishery will likely continue at similar levels. In those years where the 150 mt halibut PSC limit for the BSAI TLA yellowfin sole fishery is reached prior to harvesting all the yellowfin sole TLA allocation, some of that allocation could remain unharvested.

2.7.2 Analysis of Impacts: Alternative 2

Under this alternative, CVs harvesting BSAI TLA yellowfin sole and delivering to offshore processors would be restricted to those CVs that participated in the target fishery between 2008 through 2015. Specifically, a CV may target BSAI TLA 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 TLA yellowfin sole fishery that was delivered to a mothership or CP between 2008 – 2015 in any one year (Suboption 2.1) or in any two years (Suboption 2.2). The action would not limit CVs from targeting on BSAI TLA yellowfin sole for delivery to shoreplants. Included as part of Alternative 2 is an option to allow any trawl CV to target BSAI yellowfin sole in the TLA fishery for delivery to an offshore processor when the TLA is equal to or greater than a specific amount (Suboption 2.1.1 through Suboption 2.1.3).

Table 2-13 shows the total number of trawl CVs that participated in different BSAI groundfish fisheries from 2008 through 2015. In total, there were 125 trawl CVs that participated in BSAI groundfish fisheries from 2008 through 2015. Of those 125 CVs, 99 CVs targeted BSAI pollock, 86 CVs targeted Pacific cod, eight CVs targeted BSAI yellowfin sole, and 10 CVs targeted other groundfish.

Table 2-13 Number of trawl CVs targeting BSAI groundfish from 2008 through 2015

	BSAI target fisheries from 2008 through 2015				
	Total	**Pollock**	**Pacific cod**	**Yellowfin sole**	**Other groundfish**
Number of trawl CVs	125	99	86	8	10

Source file: BSAI_Yellowfin(7-15)-1

Table 2-14 shows the number of CVs targeting BSAI TLA yellowfins sole from 2008 through 2015, and the number of qualified CVs under Suboption 2.1 and Suboption 2.2. As noted in the table, there were a total of eight CVs owned by five companies that targeted BSAI TLA yellowfin sole from 2008 through 2015. Under Suboption 2.1, all eight of these CVs would qualify since they are credit with one targeted landing in the yellowfin sole TLA to a mothership or CP in any one year from 2008 through 2015. The eight CVs that qualify under Suboption 2.1, six also targeted pollock, seven also targeted Pacific cod, and six targeted other groundfish in the BSAI during this same period.

Narrowing the requirement to one targeted landing to a mothership or CP in the yellowfin sole TLA fishery in any two years from 2008 through 2015, reduces the number of qualified CVs to three, all owned by one company. As seen in Table 2-14, three of the CVs that qualified under Suboption 2.1 but did not qualify under Suboption 2.2 had only had one targeted landing of BSAI TLA yellowfin sole between 2008-2015. These three CVs did participate in the 2016 BSAI TLA yellowfin sole fishery. Of the

remaining two CVs that qualified under Suboption 2.1 but did not qualify under Suboption 2.2, both targeted BSAI TLA yellowfin sole in the 2008, while one of those vessels reentering the fishery in 2016.

Of the eight CVs that qualify under Suboption 2.1 and Suboption 2.2, the portion of total gross revenue from BSAI TLA yellowfin sole differed significantly between the qualifying vessels. Specifically, the three CVs that qualify under Suboption 2.2 had a much higher portion of their total gross revenue from the BSAI TLA yellowfin sole fishery then the five CVs that did not qualify for Suboption 2.2. However, one of the five CVs that did not qualify under Suboption 2.2 had a significant portion of their total gross revenue come from the BSAI TLA yellowfin sole fishery.

Table 2-14 Number of CVs targeting BSAI TLA yellowfin sole from 2008 through 2016 that qualify under Suboption 2.1 and Suboption 2.2

CVs targeting BSAI TLA YFS	2008	2009	2010	2011	2012	2013	2014	2015	Qualified CVs	
									Supoption 2.1 (any one year from 2008-2015)	Suboption 2.2 (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	
Total	**3**	**1**	**0**	**2**	**3**	**3**	**3**	**6**	**8**	**3**

Source file: BSAI_Yellowfin(7-15)-1

TLA = trawl limited access

YFS = yellowfin sole

All qualifying CVs also participated in other fisheries in addition to the BSAI TLA yellowfin sole fishery. Other fisheries that contributed to total gross revenue for the qualified vessels included BSAI Pacific cod, BSAI pollock, other BSAI groundfish fisheries, and GOA groundfish fisheries. CVs that qualified for Suboption 2.2 had a significant portion of their total gross revenue from BSAI Pacific cod and other BSAI groundfish fisheries, while the five CVs that did not qualify under Suboption 2.2 had more diversification in other fisheries to include BSAI Pacific cod, BSAI pollock, and GOA groundfish fisheries. This historical diversification in other BSAI and GOA groundfish fisheries by the five CVs that did not qualify under Suboption 2.2 could be used to offset any losses in gross revenue under Suboption 2.2.

Comparing Table 2-8 and Table 2-14 shows that of the 17 total CVs that targeted BSAI yellowfin sole from 2003 through 2016, seven of these CVs would not qualify for either suboption. Five of these CVs have not targeted BSAI yellowfin sole since 2007, one targeted the species in 2004 and 2016, while the remaining CV enter the fishery for the first time in 2016. Five of these seven CVs are AFA vessels with a significant portion of their total gross revenue is from the BSAI pollock fishery with some additional revenue from BSAI Pacific cod and GOA groundfish fisheries. The portion of total gross revenue for these seven CVs from the BSAI yellowfin sole fishery is less than one percent. Since all but one of these seven CVs that do not qualify under Suboption 2.1 or Suboption 2.2 have not participated in the BSAI yellowfin sole fishery since 2007, there is little impact to these vessels from the proposed action. The one CV that did enter the BSAI TLA yellowfin sole fishery for the first time in 2016, BSAI pollock fishery is the primary source of total gross revenue for that vessel with a small amount of revenue from the BSAI

Pacific cod fishery. Likely this CV will continue to participate in the BSAI pollock and Pacific cod fisheries to compensate for any lost gross revenue under the proposed Alternative 2 suboptions.

One of the potential benefits of Suboption 2.1 or Suboption 2.2 is it could help reduce the race for BSAI yellowfin sole in the TLA fishery as well as the reduce halibut PSC in the BSAI TLA yellowfin sole fishery through voluntary cooperative agreements between eligible CVs and the AFA CPs. By limiting the total number of CVs that can target BSAI TLA yellowfin sole for delivery to offshore processors, new CVs cannot entry the fishery, which makes cooperative management easier to achieve. As noted in Table 2-13, there were a total of 125 trawl CVs that operated in the BSAI from 2008 through 2015. Under the status quo alternative, there is the potential that some of these trawl CVs could enter the BSAI TLA yellowfin sole fishery for the first time which could increase the potential for a race for fish in the fishery. Between the two suboptions, Suboption 2.1 has less potential for cooperative management relative to Suboption 2.2 since there are eight qualified CVs and therefore more companies to agree to a cooperative agreement. Under Suboption 2.2, there are only three qualified CVs and therefore fewer companies needing to reach a cooperative agreement.

Although there is likely a greater potential for cooperative management of the BSAI TLA 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 TLA 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 2-7, as many as 12 CPs have targeted BSAI TLA yellowfin sole since 2008. In 2015, the CP sector harvested almost 9,000 mt of BSAI TLA yellowfin sole, which was 55 percent of the total TLA allocation (see Table 2-6). Overall, the CP sector, on average, harvested 85 percent of the total BSAI TLA yellowfin sole fishery from 2008 through 2016, and utilized, on average, 73 percent of the halibut PSC limit apportioned to the BSAI TLA yellowfin sole fishery from 2008 through 2016. The CP sector historically targets BSAI TLA 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 TLA 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 difficultly 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 TLA 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 TLA yellowfin sole to motherships. As noted in Table 2-9, eight mothership have participated in the BSAI yellowfin sole fishery from 2003 through 2016. Of those eight motherships, six received CV deliveries of targeted BSAI TLA yellowfin sole catch during the 2008 through 2015 period, one mothership lasted participated in 2004, and the remaining mothership was active in the fishery for the first time in 2016. Under Suboption 2.1, eight CVs would be eligible to delivery targeted BSAI TLA yellowfin sole to a mothership, while under Suboption 2.2, only three CVs would be authorized to make deliveries to a mothership. In addition, the level of vertical integration present in the CV BSAI TLA yellowfin sole fishery would also reduce mothership opportunities. Specifically, two companies own five of the eight eligible CVs under Suboption 2.1 and one company owns all three of the eligible CVs under Suboption 2.2, also own motherships that have participated in the BSAI TLA yellowfin sole fishery. Companies that own both eligible CVs and participating motherships are likely at economic advantage relatively to companies that do not own eligible CVs since these motherships must secure deliveries from a limited number of eligible CVs. Although both suboptions would limit mothership opportunities relative to status quo, Suboption 2.2 would be more limiting than Suboption 2.1.

Selection of Suboption 2.2 could also reduce production efficiencies amongst BSAI TLA 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 TLA 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 TLA 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.

2.7.2.1 Analysis of Impacts: Option 2.1

Under this option, the limits on CVs delivering BSAI TLA yellowfin sole catch to offshore processors would be lifted for the year if the TLA allocation was equal to or greater than: Suboption 2.1.1 - 15,000 mt, Suboption 2.1.2 - 20,000 mt, or Suboption 2.1.3 - 25,000 mt. In those years where the CV restriction is vacated, any CV with the appropriate LLP endorsements could be authorized to target BSAI TLA yellowfin sole and deliver the vessel's harvest to an offshore processing vessel. As noted in Table 2-15, since implementation of the BSAI TLA yellowfin sole fishery in 2008, the TLA allocation has exceeded 15,000 mt (Suboption 2.1.1) in all years except 2016 when the allocation was 14,979. During that year, 9 CV harvested 7,011 mt or 58 percent of the TLA allocation. The fishery closed on June 8th with only 271 mt of the original allocation remaining. Raising the amount of BSAI TLA 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, only adds 2015 to the list of years that CV limitation would have applied (Table 2-15). During that year, the BSAI TLA yellowfin sole allocation was 16,165 mt and six CVs targeted and delivered 7,202 mt of that allocation to offshore processors prior to the November 10 fishery closure.

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

Year	BSAI TLA YFS allocation (mt)	BSAI TLA YFS target catch from 2008-2015 (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)
2008^	32,512	20,017	12,495	3	31-Dec	X	X	X
2009^	33,154	10,181	22,973	1	2-Oct	X	X	X
2010^	22,369	19,421	2,948	0	8-Sep	X	X	X
2011	32,153	25,485	6,668	2	5-Oct	X	X	X
2012	36,297	28,140	8,157	3	31-Dec	X	X	X
2013	34,868	34,606	262	3	9-Nov	X	X	X
2014[3]	29,707	27,720	1,987	3	31-Dec	X	X	X
2015	16,165	16,073	92	6	10-Nov	X	No	No
2016	14,979	14,708	271	9	8-Jun	No	No	No

Source: NMFS Final Specifications

Source file: BSAI_Yellowfin(7-18)

[1]ITAC = TAC - CDQ

[2]Catch of YFS BSAI target catch by AM80 vessels has been removed from YFS BSAI target catch (2003-2007)

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

^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

Although this option could provide harvesting and processing opportunities for CVs delivering to offshore processors during periods of high BSAI yellowfin sole ITAC, under the right conditions, to high of a trigger for removing the CV restriction could leave a portion of the BSAI TLA yellowfin sole allocation unharvested. For example, a BSAI TLA yellowfin sole allocation greater than 25,000 mt for

lifting the CV restriction coupled with Suboption 2.2, which authorizes only three CVs for the offshore fishery, and a low harvest by the CP sector, could result in unharvested BSAI TLA yellowfin sole. This potential for unharvested BSAI TLA yellowfin sole is less likely under Suboption 2.1 since this would allow eight eligible CVs in the offshore fishery. However, selecting too low of a BSAI yellowfin sole allocation for removing CV restrictions could increase the risk of a race for fish, which would negatively impact historic participants.

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.

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 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 TLA 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 TLA yellowfin sole fishery under the proposed action relative to status quo, the ability of the CPs to harvest a significant portion of the BSAI TLA 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:

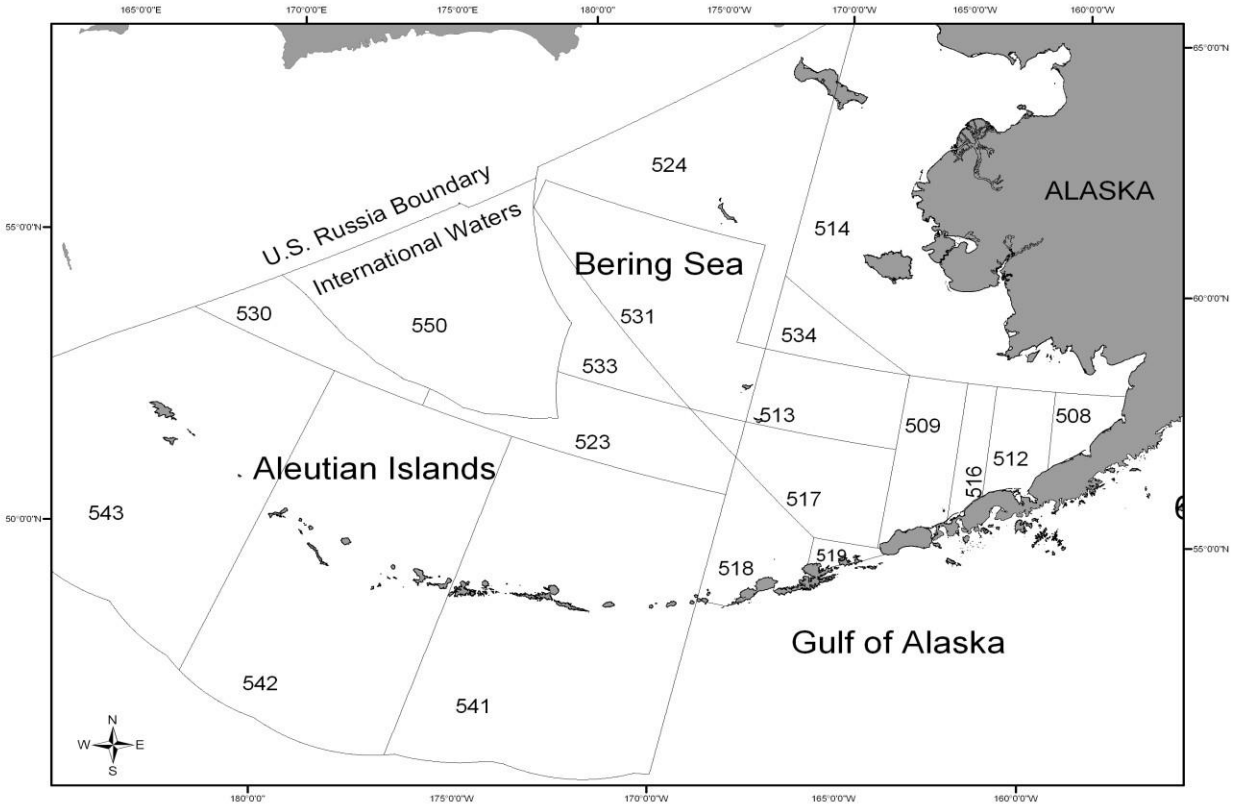
> *"the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually 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 catcher vessels, 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/finalbsai111earirfa0116.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, seasons, or areas closed to trawling. The amount of yellowfin sole harvest and the intensity of fishing with trawl gear in the Bering Sea yellowfin sole TLA fishery are expected to remain unchanged. None of the alternatives would change existing protection measures or allowable harvest amounts for important prey species. Therefore, no effects from this action are expected on groundfish, prohibited species, ecosystem component species, marine mammals, seabirds, habitat, and the ecosystem that have not already been considered in previous NEPA analyses. Potential impacts from the action are thus 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	**Prohibited Species**	**Ecosystem Component Species**	**Marine Mammals**	**Seabirds**	**Habitat**	**Ecosystem**	**Social And economic**
N	N	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.

3.2.3 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[1] species that may be affected by the action?

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 limit the access to yellowfin sole harvest to CVs that have historically participated in the fishery. 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).

[1] Note, "target" refers to the target of the action, not "target groundfish" as defined in the FMP.

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.

Relatively small amounts of other living marine resources that are not managed with TACs may inadvertently be caught by trawl catcher vessels 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 timing or location of fishing effort by catcher vessels fishing for yellowfin sole, and thus no change to the overall pattern of when, where, and how groundfish are harvested in the BSAI fisheries (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 catcher vessels in the Bering Sea. No significant changes in total harvests or when, where, and how fishing occurs are expected. 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 limit future access to the fishery to catcher vessels that have some level of previous participation in the fishery.

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 catcher vessels in the Bering Sea. No significant changes in total harvests or when, where, and how fishing occurs are expected. 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 limit access to harvest of yellowfin sole in the Bering Sea to trawl catcher vessels with some level of previous participation in the fishery. This action does not establish a precedent for future action with significant effects because this 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 percent or more of its voting stock, or a block of stock which affords control because it is large compared to other outstanding blocks of stock; or 2) if two or more persons each owns, controls or has the power to control less than 50 percent of the voting stock of a concern, with minority holdings that are equal or approximately equal in size, but the aggregate of these minority holdings is large as compared with any other stock holding, each such person is presumed to be an affiliate of the concern.

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

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

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

4.4 Reason for Considering the Proposed Action

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

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

The Council has recognized the concern of historic participants in the TLA 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 TLA fishery. Limiting access may help ensure that the TLA 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 TLA 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 TLA 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 TLA yellowfin sole fishery.

From 2008 through 2015, 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 TLA yellowfin sole fishery during 2008 through 2015 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 TLA fishery. The BSAI yellowfin sole ABC and TAC, and the processes by which the TLA fishery is managed to stay within its allocation, will not change because of Alternative 2.

There is some potential that Suboption 2.2.3 in combination with Suboption 2.2 could affect the ability to achieve the optimum yield from the BSAI TLA yellowfin sole fishery. In those years when the BSAI TLA yellowfin sole allocation is equal to or greater than 25,000 mt, the three eligible CVs may not have the harvest capacity to catch the remainder of the BSAI TLA yellowfin sole allocation if the CP sector, the other major sector in the BSAI TLA yellowfin sole fishery, are well below their historic average harvest.

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 TLA yellowfin sole fishery. Alternative 2 would not limit eligibility for AFA CPs in this fishery or CVs harvesting BSAI TLA 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. As noted in Table 2-14, Suboption 2.1 would limit the number of qualified CVs that could harvest BSAI TLA yellowfin sole for delivery to motherships or CPs to eight vessels owned by five different companies. Suboption 2.2 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 2.2, selection of this suboption could be interpreted as potentially providing excessive share of fishing for the BSAI TLA yellowfin sole offshore CV fishery. However, because the proposed action would limit access only for the offshore CV sector of the BSAI TLA yellowfin sole fishery, the Council should also consider the potential for allocation of an excessive share of harvesting privileges under Suboption 2.2 with respect to the BSAI TLA yellowfin sole fishery as a whole. The Council should also consider the excessive share provision of National Standard 4 under Option 2.1. Under this option, the BSAI yellowfin sole TLA fishery would be open for all CVs when the BSAI TLA 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 TLA yellowfin sole fishery to mitigate the risk that a "race for fish" that could develop thereby reducing efficiency of BSAI TLA 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 TLA 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 TLA 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 TLA 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 TLA yellowfin sole fishery amongst eligible CVs could reduce halibut PSC apportioned to the BSAI TLA yellowfin sole fishery. Potential factors inhibiting voluntary cooperative management and thus reduction of halibut PSC in the BSAI TLA yellowfin sole fishery is the ability of the CPs to harvest a significant portion of the BSAI TLA 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 TLA 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.

6 Preparers and Persons Consulted

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