

**Secretarial Review Draft  
Regulatory Impact Review**

**For Amendment 99 to the Fishery Management Plan for  
Groundfish of the Bering Sea and Aleutian Islands  
Management Area**

**Adjustment of the Maximum Length Overall on BSAI  
Freezer Longline License Limitation Program Licenses**

**September 2013**

Abstract: This action would increase the current limits on the size and type of vessels eligible to participate in the Bering Sea/Aleutian Islands (BSAI) longline catcher/processor subsector. This action would (1) increase the maximum length overall on eligible License Limitation Program (LLP) licenses and (2) amend the fishery management plan to ensure that LLP license holders are eligible to catch and process Pacific cod in the BSAI with longer, heavier, and more powerful vessels than are currently eligible. This action is necessary to modernize and improve efficiency in this fleet, increase retention and utilization of groundfish catch by these vessels, and to promote safety-at-sea by requiring newly built vessels to meet modern vessel safety standards.

North Pacific Fishery Management Council  
605 W. 4<sup>th</sup> Avenue, Suite 306  
Anchorage, Alaska 99501  
(907) 271-2809

NMFS, Alaska Region  
P.O. Box 21668  
Juneau, AK 99802  
(907) 586-7228

**NEXT PAGE**

## Table of Contents

<b>Executive Summary .....</b>	<b>iii</b>
<b>1.0 REGULATORY IMPACT REVIEW .....</b>	<b>1</b>
1.1 Introduction.....	1
1.1.1 What is a Regulatory Impact Review? .....	1
1.1.2 History of this Action.....	2
1.1.3 Statutory authority for this action.....	2
1.2 Regulations affecting vessel replacement in the BSAI freezer longline fleet.....	2
1.2.1 License Limitation Program .....	2
1.2.2 Fishery endorsement provisions in the AFA that affect vessel replacement .....	3
1.3 Purpose and Need Including the Problem Statement.....	4
1.4 Alternatives.....	4
1.4.1 Preferred Alternative.....	7
1.4.2 Alternatives considered but not moved forward .....	7
1.5 Description of the BSAI freezer longline sector .....	8
1.5.1 Number of LLP licenses in the freezer longline sector, and length of vessels.....	8
1.5.2 Age of vessels in the Freezer Longline Sector.....	9
1.5.3 Vessels in the Freezer Longline Sector that exceed “large vessel” criteria .....	10
1.5.4 Pacific cod catch by the Freezer Longline Sector .....	10
1.5.5 Incidental catch in the Pacific cod hook-and-line catcher/processor target fishery .....	14
1.5.6 Other BSAI target fisheries for this fleet.....	15
1.5.7 Participation in GOA fisheries by BSAI freezer longline vessels.....	16
1.5.8 Freezer Longline Conservation Cooperative (FLCC).....	18
1.5.9 Voluntary Vessel Buyback Program .....	19
1.5.10 Markets.....	20
1.5.11 Gross Revenues from fishing for Pacific cod .....	20
1.5.12 Safety Considerations .....	20
1.5.13 New vessels entering the fishery under the status quo.....	25
1.6 Potential Effects of the Alternatives .....	26
1.6.1 Alternative 1: No Action .....	26
1.6.2 Alternatives 2 and 3: Changing constraints on vessel replacement .....	28
1.6.3 Options restricting use of replaced vessels (2.1, 2.2, 3.1, and 3.2) .....	34
1.6.4 Option 3.3 – redesignate all MLOAs at 220 feet (67 m).....	37
1.6.5 Option 3.4– limitation for LLP licenses with Pacific cod pot catcher/processor endorsement.....	37
1.6.6 Potential net benefits to the Nation .....	38
<b>2.0 Consistency with Applicable Law and Policy.....</b>	<b>39</b>
2.1 National Standards .....	39
2.2 Section 303(a)(9) – Fisheries Impact Statement .....	41
2.3 BSAI Groundfish FMP Management Policy .....	41
2.4 Regulatory Flexibility Act.....	41
2.4.1 Recordkeeping and Reporting Requirements .....	42
<b>3.0 References.....</b>	<b>43</b>
<b>4.0 List of Preparers and Persons Consulted.....</b>	<b>44</b>

## LIST OF TABLES

Table 1	Number of LLP licenses with Bering Sea and Aleutian Islands hook-and-line catcher/processor Pacific cod endorsements, by maximum length overall (MLOA); and difference between vessel length and MLOA.....	9
Table 2	Build year of vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses, by maximum length overall (MLOA) .....	9
Table 3	Length, tonnage and horsepower of vessels named on the 37 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses, compared to AFA/ MARAD restrictions .....	10
Table 4	BSAI Pacific cod allocation and catch data for vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses.....	11
Table 5	Pacific cod production, by product type, for the combined years 2003 to 2012, for the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses .....	13
Table 6	Relative production of primary and ancillary Pacific cod product types for the combined years 2003 to 2012, by vessel length and year built, for the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses .....	14
Table 7	Incidental catch by the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses, and proportion of each non-target groundfish species that are retained. ....	14
Table 8	Skate retention as non-target groundfish in the Pacific cod fishery, by vessel length, for the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses .....	15
Table 9	Skate retention as non-target groundfish in the Pacific cod fishery, by age of vessel, for the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses .....	15
Table 10	Other BSAI groundfish targeted by the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses .....	16
Table 11	Number of BSAI Pacific cod hook-and-line catcher/processor LLP licenses with GOA fixed gear Pacific cod endorsements .....	17
Table 12	GOA Pacific cod fishing activity by vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses .....	18
Table 13	GOA sablefish catch by vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses.....	18
Table 14	Average gross first wholesale revenue and number of vessels from BSAI and GOA Pacific cod for the BSAI freezer longline fleet .....	20
Table 15	Fatalities on freezer longline catcher/processor vessels, 2000 through 2010 .....	22
Table 16	Fish processing products allowed on various types of fishing vessels .....	23
Table 17	Statutory requirements for large vessels and fish processing vessels .....	24
Table 18	Safety regulations applying to freezer longline vessels. ....	25

## LIST OF FIGURES

Figure 1	Locations of freezer longline hauls in the Bering Sea and Aleutian Islands for the years 2004 through 2010 .....	12
----------	--	----

## EXECUTIVE SUMMARY

This Regulatory Impact Review (RIR) was prepared to address the requirements of Presidential Executive Order 12866 for an evaluation of the benefits and costs of a proposed Federal regulatory action. The proposed action would amend the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area (BSAI FMP) and Federal regulations related to the Bering Sea/Aleutian Islands (BSAI) freezer longline (hook-and-line catcher/processor) vessels that fish for Pacific cod, to establish a process for vessel owners to replace or rebuild their vessels to a length greater than that specified under the restrictions of the License Limitation Program (LLP) and the American Fisheries Act (AFA). Specifically, the proposed action would adjust the maximum length overall (MLOA) specified on the LLP licenses assigned to these freezer longline vessels, to accommodate larger replacement vessels. The proposed action would allow freezer longline replacement vessels that exceed 165 feet (50.3 m) in registered length or 750 gross registered tons, or with engines capable of producing more than 3,000 shaft horsepower, to enter the groundfish fishery. This action is necessary to modernize and improve economic efficiency in this fleet, increase retention and utilization of groundfish catch by these vessels, and to promote safety-at-sea by requiring newly built vessels to meet modern vessel safety standards. The preferred alternative is Amendment 99 to the BSAI FMP.

### ***Purpose and Need and Alternatives***

The purpose of the proposed action is to amend the BSAI FMP and Federal regulations related to BSAI freezer longline (hook-and-line catcher/processor) vessels that fish for Pacific cod to establish a process for vessel owners to replace or rebuild their vessels to a length greater than that specified under the restrictions of the LLP and the AFA. This proposed action is necessary to improve the retention and utilization of groundfish catch by these vessels consistent with the BSAI FMP and other applicable law, improve economic efficiency, and to promote safety-at-sea by requiring newly built vessels to meet modern vessel safety standards.

To guide the development of the alternatives and analysis, the North Pacific Fishery Management Council (Council) adopted this problem statement in June 2012:

*Vessel length restrictions on LLP licenses and in the AFA, for BSAI freezer longline vessels, limit the ability for owners to rebuild or replace their vessels with larger vessels. Providing this ability would allow for improved vessel safety, meet international class and load line requirements that would allow a broader range of onboard processing options, and improve the economic efficiency of their vessels.*

### ***Description of the Alternatives***

The alternatives and options recommended by the Council in December 2011, and as modified in June 2012 to provide for a broader range of vessel length restrictions, are listed below. The Council identified a preferred alternative at final action in October 2012, which is also identified below.

**Alternative 1:** No Action. Under this alternative, the BSAI Pacific cod hook and line catcher/processor vessel length, horsepower, and tonnage restrictions currently in place would continue to apply.

**Alternative 2:** For those LLP licenses with catcher/processor and hook-and-line Pacific cod endorsements for the BS or AI, with an MLOA of less than 150 feet (45.7 m), increase the MLOA of the LLP license 20 percent, not to exceed an MLOA of 150 feet (45.7 m).

Option 2.1: Any vessel replaced under this program would not be eligible to be designated on an FFP or an LLP.

Option 2.2: Replaced vessels may not be used to replace other BSAI hook and line catcher/processor vessels.

**Alternative 3: Preferred Alternative (as modified by Options 3.3 and 3.4)** The MLOA requirements on LLP licenses with catcher/processor and hook-and-line Pacific cod endorsements for the BS or AI would not apply and **the Council recommends that vessels named on these LLP licenses be authorized for use in the EEZ under the jurisdiction of the North Pacific Fishery Management Council, which is intended to clarify that these vessels are eligible to receive a certificate of documentation consistent with 46 U.S.C. 12113(d) and MARAD regulations at 46 C.F.R. 356.47.**

Option 3.1: Any vessel replaced under this program would not be eligible to be designated on an LLP, except on LLP licenses with catcher/processor and hook-and-line Pacific cod endorsements for the BS or AI.

Option 3.2: Replaced vessels may not be used to replace other BSAI hook and line catcher/processor vessels.

Option 3.3: **(Preferred Alternative) The MLOA on LLP licenses with catcher/processor and hook-and-line Pacific cod endorsements for the BS or AI would be modified to 220 feet (67 m) MLOA.**

Option 3.4: **(Preferred Alternative) Owners of LLP licenses with catcher/processor and pot cod endorsements will have 36 months from the implementation of this action to either surrender the pot cod endorsements and receive a LLP license at 220 feet (67 m) MLOA or the current LLP length restriction would continue to apply.**

### **Alternatives 1, 2, and 3**

Three alternatives, including no action, are included in this analysis. Under Alternative 1, the no action alternative, freezer longline vessel length restrictions would continue to apply. Vessel owners can currently replace their vessels at any time, and move their LLP license to the replacement vessel, so long as the vessel length does not exceed the MLOA of the LLP license with which the vessel is used.

Alternative 2 would adjust the MLOA on all qualifying LLP licenses upwards by 20 percent, although not to exceed 150 feet (45.7 m) MLOA. The criteria for qualifying for this proposed change would rely on whether an LLP license is endorsed for fishing Pacific cod; however, the change in MLOA would apply to a vessel's participation in any groundfish target fishery.

Under Alternative 3, length restrictions established by the MLOA would be removed. As with Alternative 2, this alternative proposes a change to the groundfish LLP license that is not specific to a particular target fishery, and this alternative would require changes to the FMP and regulations. Alternative 3, as it is included in the preferred alternative,<sup>1</sup> would establish that any vessel named on a qualifying LLP license is eligible to receive a certificate of documentation for a Federal fisheries endorsement, consistent with regulations at 46 U.S.C. 12113(d).

---

<sup>1</sup> Note, Alternative 3 represents the Council's preferred alternative, although it is modified by Options 3.3 and 3.4.

## **Options under Alternatives 2 and 3 – Options 2.1, 2.2, 3.1, and 3.2**

Option 2.1 would require that replaced vessels are ineligible for use in Federal groundfish or crab fisheries in the BSAI or the Gulf of Alaska (GOA). Option 3.1 is similar to Option 2.1; however, it would establish an exemption for replaced vessels that are used to replace another vessel within the BSAI freezer longline Pacific cod sector. Options 2.2 and 3.2 are identical, and impose a narrow restriction: the vessel that is named on a qualifying LLP license may not be used to replace another vessel associated with a qualifying LLP license. That is, a replaced vessel could not be used to replace a different vessel within the BSAI freezer longline catcher/processor subsector.

## **Preferred Alternative (Alternative 3 modified by Options 3.3 and 3.4)**

The preferred alternative, which includes Alternative 3 as modified by options 3.3 and 3.4, would increase the length of the MLOA on LLP licenses with catcher/processor and hook-and-line Pacific cod endorsements for the Bering Sea or Aleutian Islands to 220 feet (67 m). The preferred alternative would further modify qualifying LLP licenses that are also endorsed to participate in the catcher/processor pot Pacific cod fisheries. These LLP license holders have the option to make a one-time, permanent election to surrender their Pacific cod pot gear catcher/processor endorsements and receive a 220-foot (67-m) MLOA on their LLP license.<sup>2</sup>

The preferred alternative would also establish that any vessel named on a qualifying LLP license is eligible to receive a certificate of documentation for a Federal fisheries endorsement, fishery endorsement, as regulated by [46 CFR 356.47] the Department of Transportation Maritime Administration (MARAD).

## ***Summary of the Potential Effects of the Alternatives***

Under **Alternative 1**, the status quo alternative, no incentive to accelerate vessel replacement for the freezer longline fleet will be implemented. Vessel replacement is allowed under the status quo, and certain vessel owners have chosen, and will continue to choose, to build replacement vessels; however, significant disincentives exist, especially for vessels less than 125 feet (38.1 m) length overall (LOA). In many cases, the cost of a new vessel may not be affordable without the increased production efficiency that could result from constructing a larger vessel that meets modern safety requirements.

**Alternative 2**, relative to status quo, provides an opportunity for holders of freezer longline LLP licenses to receive an adjustment to their MLOA, to either 149 feet (45.4 m) or 150 feet (45.7 m) LOA. This would give those LLP license holders the opportunity to replace existing vessels with somewhat larger ones. Having this ability may improve production efficiency, while at the same time allow for increased vessel safety. This alternative affects fewer than half of the BSAI freezer longline vessels, and limitations on vessel replacement length under this alternative could limit the incentive for vessels to take advantage of vessel replacement, if improvements in production efficiency are insufficient to justify the cost of a new vessel.

**Alternative 3**, relative to the other alternatives, provides the most comprehensive opportunity for owners of freezer longline vessels to replace their vessels with larger vessels. The absence of vessel length restrictions allows vessel owners to design more efficient and safer replacement freezer longline vessels. While, by regulation, the vessel length would be unrestricted, there appear to be efficiency limitations that

---

<sup>2</sup> Note, the Council rewrote this option at the June 2012 initial review. Previously, it was written such that it applied only to LLP licenses endorsed for the BSAI pot cod fishery; the Council's revision has extended the restriction to any catcher/processor and pot Pacific cod endorsement, in the BSAI or the GOA.

would likely limit vessel length in replacement vessels. There are relatively few opportunities for LLP license holders with unrestrictive MLOAs to fish their larger replacement vessels in other fisheries, as most other available target fisheries for this fleet are already constrained by sector allocations or individual fishing quotas.

**Preferred Alternative**

The proposed action will not affect the sustainability or catch levels of groundfish in the BSAI or GOA because the fishery will continue to be managed under the current harvest specifications process. Similarly, the proposed action would generally not affect the ability to achieve the optimum yield from each groundfish fishery, to the extent that the preferred alternative provides an opportunity for increased utilization of existing catch.

## 1.0 REGULATORY IMPACT REVIEW

### 1.1 Introduction

The purpose of the proposed action is to change criteria to allow owners of BSAI freezer longline (hook-and-line catcher/processor) vessels that fish for Pacific cod, to replace or rebuild their vessels to a length greater than that specified under the restrictions of the LLP and the AFA. Specifically, the Council proposes, first, to adjust the MLOA specified on the LLP license assigned to these freezer longline vessels to accommodate larger replacement vessels. Originally implemented in 2000, each LLP license is endorsed for management areas, catcher vessel and/or catcher/processor operation type, and the Pacific cod fixed gear target fishery, and specifies an MLOA for licensed vessels. The MLOA for the license was based on the length of the vessel initially receiving the license.

Secondly, the Council proposes to allow freezer longline replacement vessels that exceed 165 feet (50.3 m) in registered length or 750 gross registered tons, or with engines capable of producing more than 3,000 shaft horsepower, to enter the groundfish fishery. Regulations at 46 U.S.C. 12113(d) limit vessels greater than 165 feet (50.3 m) in registered length, or more than 750 gross registered tons, or with engines capable of producing more than 3,000 shaft horsepower from entering fisheries unless the vessel carried a fishery endorsement prior to September 25, 1997, or the Council has recommended and the Secretary of Commerce has approved a conservation and management measure to allow the vessel to be used in fisheries under its authority.

This action would affect vessels that are part of the longline catcher/processor subsector, as defined in the Consolidated Appropriations act of 2005, section 219(A)(6), which states:

LONGLINE CATCHER PROCESSOR SUBSECTOR.—The term “longline catcher processor subsector” means the holders of an LLP license that is noninterim and transferable, or that is interim and subsequently becomes noninterim and transferable, and that is endorsed for Bering Sea or Aleutian Islands catcher processor fishing activity, C/P, Pacific cod, and hook and line gear.

LLP licenses are issued to an individual person or entity. They are not vessel-specific; they can be transferred from vessel to vessel, and can be “stacked” so that a single vessel may operate more than one LLP license. Thus there is not a fixed group of vessels that will be impacted by this action. Because it is anticipated that there will be very little transference of LLP licenses among vessels, however, the vessels that currently possess an LLP license, meeting the definition above, are considered the impacted entities. There are currently 36 LLP licenses, associated with 33 vessels, in the universe of impacted entities.

There are other longline catcher/processors fishing other targets in the BSAI, or fishing exclusively in the GOA, which do not meet this definition and are not directly affected by this action.

#### 1.1.1 What is a Regulatory Impact Review?

This RIR is required under Presidential Executive Order (E.O.) 12866 (58 FR 51735, September 30, 1993). The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following statement for the order:

*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.*

EO 12866 further 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.

### **1.1.2 History of this Action**

At its February 2011 meeting, the Council tasked staff to prepare a discussion paper on vessel replacement provisions for the BSAI freezer longline fleet. The request originated from a proposal presented by an industry representative. The Council tasked staff to prepare a discussion paper using the problem statement, and proposed vessel replacement alternatives for the BSAI freezer longline fleet, provided in the industry proposal. The discussion paper was originally scheduled for the October meeting, but the Council postponed review of the paper, and rescheduled the action as an initial review analysis to be prepared for the December meeting. In December 2011 and June 2012, the Council reviewed initial drafts, and revised the problem statement and alternatives. In October 2012, the Council recommended a preferred alternative and took final action.

### **1.1.3 Statutory authority for this action**

NMFS manages the U.S. groundfish fisheries in the portion of its exclusive economic zone (EEZ) within the BSAI according to the BSAI FMP. The BSAI FMP was prepared by the Council under the authority of the Magnuson-Stevens Fishery Conservation and Management Act. Regulations (Magnuson-Stevens Act) governing fishing by U.S. vessels in accordance with the BSAI FMP appear at subpart H of 50 CFR part 600 and 50 CFR part 679.

## **1.2 Regulations affecting vessel replacement in the BSAI freezer longline fleet**

Under current regulations, vessel owners within the freezer longline subsector are allowed to replace their vessels within the constraints of the LLP and the AFA. These constraints are as described below.

### **1.2.1 License Limitation Program**

The License Limitation Program became effective on January 1, 2000. The program limits the number, size, and specific operation of vessels fishing groundfish and crab in the BSAI and GOA, based on historical participation. Licenses are endorsed for separate management areas (Bering Sea [BS], Aleutian Islands [AI], Western GOA, Central GOA, and Southeast Outside), and operation type (catcher vessel

[CV] or catcher/processor [C/P]). Since 2003, BSAI groundfish LLP licenses have also been endorsed for Pacific cod.<sup>3</sup> Fixed gear vessels greater than or equal to 60 feet (18.3 m), participating in the BSAI Pacific cod fishery, must qualify for Pacific cod endorsements, by gear type (longline or pot) and operation type (catcher vessel or catcher/processor).

LLP licenses also specify an MLOA for freezer longline vessels, which constrains the license from being used with a vessel whose LOA exceeds the MLOA listed on the LLP license. The MLOA for a qualifying vessel was first calculated as part of the vessel moratorium action that preceded the development of the LLP (NPFMC 1994). The Council's objective with the moratorium was to freeze the number of vessels participating in the groundfish, crab, and halibut fisheries, and control continued growth in fishing capacity, while the Council developed a comprehensive, long-term management plan for the fisheries under its jurisdiction. At the moratorium's inception, a "twenty percent rule" was adopted for qualifying vessels less than 125 feet (38.1 m), such that the MLOA was determined to be 1.2 times the LOA, or 125 feet (38.1 m) (whichever is less). For vessels with an LOA of greater than 125 feet (38.1 m), the MLOA was calculated as equivalent to the LOA of the qualifying vessel. The twenty percent rule was intended to allow some flexibility for vessels less than 125 feet (38.1 m) to accommodate ongoing modifications in operations, while only allowing marginal increases in overall catching capacity and capitalization. The LLP continued the MLOA requirement as a provision of the license. The LLP also established three vessel length classes (less than 60 feet [18.3 m] LOA; greater than or equal to 60 feet [18.3 m], but less than 125 feet [38.1 m] LOA; or greater than or equal to 125 feet [38.1 m] LOA), noting that a vessel length upgrade under the 20 percent rule could not exceed the length constraint of their vessel class.

### **1.2.2 Fishery endorsement provisions in the AFA that affect vessel replacement**

Important in the proposed action, the AFA made two amendments to fishery endorsement provisions that affect vessel replacement. First, section 208(g) contains specific vessel replacement provisions that are applicable to vessels eligible to fish in the directed pollock fishery in the Bering Sea. Since the vessels currently identified on the LLP licenses of the freezer longline catcher/processor fleet are not eligible for the directed pollock fishery, that section does not apply to this fleet. The second provision affecting vessel replacement prohibits vessels exceeding certain length, tonnage, and horsepower limits from entering fisheries<sup>4</sup> and from obtaining a fishery endorsement, unless specific conditions are met (see 46 U.S.C. 12113(d)(2) and corresponding regulations at 46 C.F.R 356.47). Specifically, vessels greater than 165 feet (50.3 m) in registered length,<sup>5</sup> of more than 750 gross registered tons, or with engines capable of producing more than 3,000 shaft horsepower, are prohibited from obtaining a fishery endorsement, unless the vessel carried a fishery endorsement prior to September 25, 1997, or the regional fishery management council has recommended and the Secretary of Commerce has approved a conservation and management measure to allow the vessel to be used in fisheries under its authority, since enactment of the AFA. Since the Council has adopted no such measure for the freezer longline catcher/processor subsector,<sup>6</sup> any freezer longline catcher/processor that does not already have a fishery endorsement, and is greater than 165 feet (50.3 m) in registered length or exceeds 750 gross registered tons, or with engines capable of producing more than 3,000 shaft horsepower, cannot receive a fishery endorsement at this time.

The issuance of fishery endorsements, as regulated by 46 CFR 356.47, is tasked to the MARAD. NMFS and MARAD staff concur that if the Council chooses to allow new vessels exceeding these thresholds to

---

<sup>3</sup> Similar provisions are now required in the GOA, beginning in 2012.

<sup>4</sup> Other than the directed pollock fishery in the Bering Sea, where vessel replacement is regulated by the AFA provision in section 208(g)

<sup>5</sup> Note, registered length is measured at the water line, and does not represent length overall.

<sup>6</sup> Note, the Council recently recommended provisions for allowing replacement vessels in the Amendment 80 program, and clarified that an Amendment 80 replacement vessel that exceeds the AFA specifications is eligible to receive a fishery endorsement.

participate in the fisheries, such a measure would best be accomplished through an fishery management plan amendment. The amendment would specify that hook-and-line catcher/processor replacement vessels may exceed the length, horsepower, and/or tonnage requirements in regulation at 46 CFR 356.47 when participating in fisheries (other than the BSAI directed pollock fishery) that are under the Council's authority. MARAD has stated that it would request documentation from NMFS of the Secretary's approval of any such FMP amendment, prior to issuing a fishery endorsement to a hook-and-line catcher/processor replacement vessel.

### 1.3 Purpose and Need Including the Problem Statement

The purpose of the proposed action is to amend the BSAI FMP and Federal regulations related to BSAI freezer longline (hook-and-line catcher/processor) vessels that fish for Pacific cod to establish a process for vessel owners to replace or rebuild their vessels to a length greater than that specified under the restrictions of the LLP and the AFA. This proposed action is necessary to improve the retention and utilization of groundfish catch by these vessels consistent with the BSAI FMP and other applicable law, improve economic efficiency, and to promote safety-at-sea by requiring newly built vessels to meet modern vessel safety standards.

To guide the development of the alternatives and analysis, the Council adopted this problem statement in June 2012:

*Vessel length restrictions on LLP licenses and in the AFA, for BSAI freezer longline vessels, limit the ability for owners to rebuild or replace their vessels with larger vessels. Providing this ability would allow for improved vessel safety, meet international class and load line requirements that would allow a broader range of onboard processing options, and improve the economic efficiency of their vessels.*

### 1.4 Alternatives

The alternatives and options recommended by the Council in December 2011, as modified in June 2012, provide for a broader range of vessel length restrictions, as listed below. The Council identified a preferred alternative at final action in October 2012, which is also identified below (in **BOLD**).

Alternative 1: No Action. Under this alternative, the BSAI Pacific cod hook and line catcher/processor vessel length, horsepower, and tonnage restrictions currently in place would continue to apply.

Alternative 2: For those LLP licenses with catcher/processor and hook-and-line Pacific cod endorsements for the BS or AI, with an MLOA of less than 150 feet (45.7 m), increase the MLOA of the LLP license 20 percent, not to exceed an MLOA of 150 feet (45.7 m).

Option 2.1: Any vessel replaced under this program would not be eligible to be designated on an FFP or an LLP.

Option 2.2: Replaced vessels may not be used to replace other BSAI hook and line catcher/processor vessels.

**Alternative 3: (Preferred Alternative)** The MLOA requirements on LLP licenses with catcher/processor and hook-and-line Pacific cod endorsements for the BS or AI would not apply and **the Council recommends that vessels named on these LLP licenses be authorized for use in the EEZ under the jurisdiction of the North Pacific Fishery Management Council, which is intended to clarify that these vessels are eligible to**

**receive a certificate of documentation consistent with 46 U.S.C. 12113(d) and MARAD regulations at 46 C.F.R. 356.47.**

Option 3.1: Any vessel replaced under this program would not be eligible to be designated on an LLP, except on LLP licenses with catcher/processor and hook-and-line Pacific cod endorsements for the BS or AI.

Option 3.2: Replaced vessels may not be used to replace other BSAI hook and line catcher/processor vessels.

**Option 3.3: (Preferred Alternative) The MLOA on LLP licenses with catcher/processor and hook-and-line Pacific cod endorsements for the BS or AI would be modified to 220 feet (67 m) MLOA.**

**Option 3.4: (Preferred Alternative) Owners of LLP licenses with catcher/processor and pot cod endorsements will have 36 months from the date of implementation of this action to either surrender the pot cod endorsements and receive a LLP license at 220 feet (67 m) MLOA or the current LLP length restriction would continue to apply.**

### **Alternatives 1, 2, and 3**

Three alternatives, including no action, are included in this analysis. Under Alternative 1, the no action alternative, freezer longline vessel length restrictions would continue to apply. Vessel owners can currently replace their vessels at any time, and move their LLP license to the replacement vessel, so long as the vessel length does not exceed the MLOA of the LLP license with which the vessel is used. In addition, freezer longline vessels that (1) are greater than 165 feet (50.3 m) in registered length, (2) exceed 750 gross registered tons, or (3) have engines capable of producing 3,000 shaft horsepower or greater, which do not already have a Federal fisheries endorsement, cannot receive a Federal fisheries endorsement, and, therefore, cannot be used to replace an existing BSAI freezer longline vessel.

Alternative 2 would adjust the MLOA on all qualifying LLP licenses upwards by 20 percent, although not to exceed 150 feet (45.7 m) MLOA. In order to qualify, the LLP license must have a Pacific cod hook-and-line catcher/processor endorsement for the Bering Sea or Aleutian Islands, and an MLOA of less than 150 feet (45.7 m). Under this alternative, 7 LLP licenses would have their MLOA increased from 124 feet (37.8 m) to 149 feet (45.4 m), and 10 LLP licenses, with an MLOA between 125 feet (38.1 m) and 149 feet (45.4 m), would have their MLOA increased to 150 feet (45.7 m). Although the criteria for qualifying for this proposed change rely on whether an LLP license is endorsed for fishing Pacific cod, the change in MLOA appertains to the groundfish license, and therefore affects a vessel's participation in any groundfish target fishery. Fishery management plan and regulatory amendments would be required to implement this alternative.

Under Alternative 3,<sup>7</sup> the MLOA on the 36 qualifying LLP licenses would not change, however, the restriction represented by the MLOA would be removed. In order to qualify, the LLP license must have a Pacific cod hook-and-line catcher/processor endorsement for the Bering Sea or Aleutian Islands. Under this alternative, these 36 LLP licenses could be used on a vessel of any length. As with Alternative 2, this alternative proposes a change to the groundfish LLP license and is not specific to a particular target fishery. Also, fishery management plan and regulatory amendments would be required to implement this proposed change. Alternative 3 would also establish that any vessel named on a qualifying LLP license is eligible to receive a certificate of documentation for a Federal fisheries endorsement, consistent with

---

<sup>7</sup> Note, Alternative 3 represents the Council's preferred alternative, although it is modified by Options 3.3 and 3.4.

regulations at 46 U.S.C. 12113(d). The issuance of fishery endorsements, as regulated by 46 CFR 356.47, is tasked to the MARAD. The statement of eligibility would be established in the FMP (i.e., through an FMP amendment), which would be referenced by MARAD when issuing a certificate of documentation.

Additionally, under each alternative, the Council identified options. For each alternative, the Council considered all of the relevant options. The Council selected Alternative 3 options 3.3 and 3.4 as the preferred alternative. All of the options are described below.

### **Options restricting use of replaced vessels under Alternatives 2 and 3 – Options 2.1, 2.2, 3.1, 3.2**

Alternatives 2 and 3 both have two options that impose restrictions on how vessels that are named on the qualifying LLP licenses may be used, once replaced. Option 2.1 is the most restrictive. If the vessel that is named on a qualifying LLP license is replaced, the replaced vessel may not be designated on any other FFP or LLP license. That is, the replaced vessel may no longer be used for groundfish or crab fishing in the BSAI or the GOA Federal fisheries. Option 3.1 is similar to Option 2.1, however it relaxes the restriction such that a vessel that is named on a qualifying LLP license may be used on another LLP license that has a catcher/processor and hook-and-line Pacific cod endorsement for the Bering Sea or Aleutian Islands. That is, the replaced vessel cannot be used for groundfish or crab fishing in the BSAI or GOA fisheries, except that it may be used to replace another vessel within the BSAI freezer longline Pacific cod sector. Options 2.2 and 3.2 are identical, and impose a narrow restriction: the vessel that is named on a qualifying LLP license may not be used to replace another vessel associated with a qualifying LLP license. That is, a replaced vessel could not be used to replace a different vessel within the BSAI freezer longline sector.

Under these options, the agency would need to implement a tracking system for the qualifying LLP licenses and associated vessels under either Alternative 2 or Alternative 3, implemented with one of these options. The vessel that is associated with the LLP license on the effective date of the amendment would be considered the original vessel, and if the LLP license is moved to a different vessel, it would be considered a replacement vessel. NMFS must track both the original vessel, and any replacement vessels that are again replaced, to ensure that they are no longer used as a BSAI groundfish hook-and-line catcher/processor (Options 2.2, 3.2), no longer designated on any groundfish or crab FFP or LLP license (Option 2.1), or are only designated on an LLP license that has a BSAI catcher/processor hook-and line endorsement for Pacific cod (Option 3.1). This would apply to any movement of an LLP license from one vessel to another, for whatever reason (e.g., a newly-built replacement vessel entering the fishery, a reorganization of LLP licenses among multiple vessels owned by a single company, or an LLP license holder choosing to exit the Pacific cod fishery).

### **Option 3.3 under Alternative 3 – redesignate all MLOAs at 220'**

Option 3.3, under Alternative 3 (part of the preferred alternative), would re-designate the MLOA on the 37 qualifying LLP licenses to 220 feet (67 m) MLOA. Any vessel associated with a qualifying LLP license may be up to 220 feet (67 m) LOA.

### **Option 3.4 under Alternative 3 – limitation for LLP licenses with Pacific cod pot catcher/processor endorsement**

Option 3.4 (part of the preferred alternative) limits the proposed change in Alternative 3 with respect to qualifying LLP licenses that also have a catcher/processor and pot Pacific cod endorsement. Alternative 3, with this option, would further modify qualifying LLP licenses that are also endorsed to participate in the catcher/processor pot Pacific cod fisheries. These LLP license holders would be required to make a one-time, permanent election to surrender their Pacific cod pot gear catcher/processor endorsements and

receive a 220-foot (67-m) MLOA on their LLP license. If the holder of the qualifying LLP license does not make such an election, the LLP licenses would not change. For example, license holders not making the one-time, permanent election would retain their original MLOA, which would allow them to continue fishing in both the Pacific cod longline and pot fisheries. Three of the 33 qualifying LLP licenses under the preferred alternative also have pot Pacific cod endorsements. These LLP license holders would have 36 months from the date of implementation of this action to make this determination; after which, the LLP license holders would be ineligible for an increase in the MLOA on their LLP licenses.

#### **1.4.1 Preferred Alternative**

Under the Council's preferred alternative, the length restrictions established by the LLP and the AFA would be removed. The Council has recommended that changing the MLOA on LLP licenses that have a Pacific cod hook-and-line catcher/processor endorsement for the Bering Sea or Aleutian Islands (i.e., the BSAI freezer longline cod fleet) is necessary to meet the purpose and need of this action. The MLOA on all LLP licenses in the sector would be increased to 220 feet (67 m). In making this recommendation, the Council has affirmed that the "large vessel" capacity restrictions of the AFA should no longer apply to this sector, given the conservation and management measures in place in the BSAI cod fishery, including a direct sector allocation and a limited class of participants. The Council observed that, while vessels within this sector can currently replace their vessels with replacement vessels less than or equal to the length and tonnage limits, several disincentive may impede vessel owners from replacing older vessels with newer replacement vessels that meet modern safety and efficiency standards. This preferred alternative to the status quo is intended to provide substantive incentives to eligible vessel owners to replace older vessels with longer, safer vessels. The preferred alternative would lengthen vessel length restrictions and increase capacity restrictions that are intended to provide substantial benefits, both by improving production efficiency and addressing safety concerns that have been identified by the U.S. Coast Guard and industry.

In order to protect other participants in the BSAI and GOA Pacific cod pot fisheries, the Council recommended provisions that would provide qualifying LLP license holders with the flexibility to elect to either extinguish their pot cod endorsements and, thus, receive the larger MLOA, or to retain their current MLOA and continue to participate in both fisheries. In addition, the Council discussed impacts to participants in the GOA freezer longline Pacific cod fishery, but concluded that relaxing length restrictions does not change the ability of the BSAI fleet to increase its participation in GOA Pacific cod, and noted that a cooperative is under development that will provide the best mechanism for protection of vessels operating exclusively in the GOA.

#### **1.4.2 Alternatives considered but not moved forward**

During the first initial review draft of this analysis, in December 2011, the Council considered whether the scope of the analysis should also include Pacific cod freezer longline vessels that are endorsed exclusively for the GOA. The Council explicitly chose to limit this action to LLP licenses endorsed for the BSAI. This decision was reaffirmed by the Council at initial review in June 2012. As the Council articulated in their problem statement for the analysis, this action is responsive to operational concerns that have been identified in the BSAI Pacific cod longline catcher/processor fleet. This fleet consists of larger vessels which fish off a Pacific cod TAC in the BSAI that is significantly bigger than that in the GOA. Moreover, AFA restrictions currently constrain the holders of some LLP licenses endorsed for the BSAI from replacing their vessels with a vessel of the same size, for example vessels larger than 165 feet (50.3 m) that are currently endorsed. The length and power restrictions established by the AFA are not limiting to small vessels in the fleet, especially, the much smaller, exclusively GOA-endorsed vessels. The Council has not identified operational concerns with the exclusively GOA-endorsed vessels, compared with the specific problems that are being addressed in this action for the BSAI fleet.

## **1.5 Description of the BSAI freezer longline sector**

The vessels in this sector are catcher/processors, from 107' to 180' LOA, using longline gear in the BSAI to target Pacific cod and other species. Since January 1, 2003, freezer longliners have been required to have a Pacific cod hook-and-line catcher/processor endorsement on their LLP license to target BSAI Pacific cod with longline gear and process it onboard. The Consolidated Appropriations Act of 2005 (Pub. L. 108-447; December 8, 2004) (Section 219(a)(1)) defined eligibility in the longline catcher/processor subsector as the holder of an LLP license that is transferable, or becomes transferable, and that is endorsed for Bering Sea or Aleutian Islands catcher/processor fishing activity, Pacific cod, and longline gear.

The primary target species in the freezer longline fisheries are Pacific cod, sablefish, and Greenland turbot. In addition, longline vessels also may retain incidentally caught species, such as skates, rockfish, arrowtooth flounder, and pollock.

Most vessels in this sector were converted to this class from some other use and were not necessarily fishing vessels before being converted. Only a small number of vessels have a long history in this class, and they tend to be smaller. The vessels that entered the class most recently tend, generally, to be larger, and were designed to specifically target Pacific cod in the BSAI. Larger vessels in this class can operate in the BSAI and GOA during most weather conditions.

Longline gear is set on the sea floor, with baited hooks, or gangions, attached. Each longline can be several miles in length, and have thousands of hooks. A longline vessel typically sets several lines for varying amounts of time. The lines are retrieved with hydraulic power over a roller, mounted on the side of the vessel. Fishing trips tend to range in length from 2 to 3 weeks.

Only 10 percent of the vessels bait hooks by hand; the others use an automatic baiting system. Vessels with an automatic baiter travel about 7 miles per hour when setting gear, which is roughly the speed at which the baiting machine can keep up. The amount of gear set depends on sea conditions and how long the operators want to fish before they pick up the gear. The length of a set varies from 3 miles to 30 miles.

Vessels pick up gear more slowly than when they set it, with the pickup rate governed by how fast they can handle the catch. Fish hauled onboard are immediately shaken loose and thrown into a trough. A crewmember known as a "bleeder" bleeds the fish as soon as possible. Fish are then headed and gutted by hand or by machine. Fish are sorted by size/weight, packed, and frozen. Product is offloaded to cold storage, in port, or onto a trumper at sea. The majority of the freezer longline product is marketed overseas, with price determining where product is sold.

Prior to January 1, 2013, all vessels in this sector are required to have observer coverage at least some of the time. Under current regulations, vessels that are less than 125 feet (38.1 m) LOA must have an observer on board for 30 percent of fishing days, by quarter. Vessels that are 125 feet (38.1 m) LOA or larger must have an observer onboard 100 percent of the time. With the implementation of the restructured observer program, all catcher/processors are currently required to have an observer onboard 100 percent of the time, regardless of vessel length.

### **1.5.1 Number of LLP licenses in the freezer longline sector, and length of vessels**

Table 1 shows the number of LLP licenses that are potentially affected by this action, categorized by their MLOA, and whether they have Pacific cod hook-and-line endorsements for both the Bering Sea and Aleutian Islands. The table also shows the difference between the actual length of the vessel on which the

LLP license is currently used, and the MLOA on the LLP license. There are 36 LLP licenses with catcher/processor hook-and-line endorsements for Pacific cod in the Bering Sea, which could be affected by this action. Thirty-four of those also have an Aleutian Islands endorsement. Seventeen of the qualifying LLP licenses have an MLOA of less than 150 feet (45.7 m).

**Table 1 Number of LLP licenses with Bering Sea and Aleutian Islands hook-and-line catcher/processor Pacific cod endorsements, by maximum length overall (MLOA); and difference between vessel length and MLOA**

MLOA	Number of licenses	Pacific cod hook-and-line catcher/processor endorsement		Difference between vessel length and MLOA*			
		Bering Sea	Aleutian Islands	0	1' to 6'	11' to 25'	>40'
124'	7	7	7	5	1	1	
125' to 149'	10	10	10	5	4	1	
150' to 174'	10	10	8	7	2	1	
175' to 185'	6	6	6	4		1	1
185' to 199'	3	3	3			1	2
<b>TOTAL</b>	<b>36</b>	<b>36</b>	<b>34</b>	<b>21</b>	<b>7</b>	<b>5</b>	<b>3</b>

\*For the vessel currently named on the LLP license. The vessel length is as listed on the vessel's Federal Fisheries Permit.

\*\* NMFS has promulgated regulations to remove this LLP license as part of the buyback program (see Section 1.5.9 of this analysis for more details. This LLP license is not currently associated with any vessel.

Source: NMFS Restricted Access Management data, compiled by AKFIN, May 2012.

There are three LLP licenses, identified in Table 1, which have a difference between the vessel length and MLOA of greater than 45 feet. These three LLP licenses are stacked on smaller vessels within the sector, thus; there are only 33 vessels that are currently active in the freezer longline sector in the BSAI.

### 1.5.2 Age of vessels in the Freezer Longline Sector

Table 2 shows the age of vessels in the freezer longline fleet, categorized by the MLOA on the qualifying LLP license. As there are three vessels that are each named on two LLP licenses, the final row shows the number of unique vessels in each age category. A third of the vessels in the freezer longline sector were built before 1976, mostly before 1946. Only two vessels in the fleet have been built since 1996. The average age of the vessels in the fleet is 39 years.

**Table 2 Build year of vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses, by maximum length overall (MLOA)**

MLOA	Build year of the vessel currently named on the LLP license					Total
	1936–1945	1966–1975	1976–1985	1986–1995	1996–2005	
124'	1		3	2	1	7
125' to 149'			3	7		10
150' to 174'	5	1	3	1		10
175' to 185'	4		1		1	6
185' to 199'	1			1	1	3
<b>Total by LLP license</b>	<b>11</b>	<b>1</b>	<b>10</b>	<b>11</b>	<b>3</b>	<b>36</b>
<b>Total of unique vessels**</b>	<b>10</b>	<b>1</b>	<b>10</b>	<b>10</b>	<b>2</b>	<b>33</b>

\*There are 3 vessels that are each named on 2 LLP licenses, which have been subtracted from the LLP license total as appropriate. Source: AKFIN Vessel Table and NMFS Restricted Access Management data, compiled by AKFIN, May 2012.

### 1.5.3 Vessels in the Freezer Longline Sector that exceed “large vessel” criteria

Regulations at 46 U.S.C. 12113(d) limit vessels greater than 165 feet (50.3 m) in registered length,<sup>8</sup> or more than 750 gross registered tons, or with engines capable of producing more than 3,000 shaft horsepower, from entering fisheries, unless the vessel carried a fishery endorsement prior to September 25, 1997, or the Council has recommended, and the Secretary of Commerce has approved, a conservation and management measure to allow the vessel to be used in fisheries under its authority. There are currently nine vessels within the freezer longline sector that exceed at least one of the thresholds identified (Table 3). Although these vessel owners are allowed to replace vessels under current regulations, they could not replace them with a vessel of comparable capacity. Table 3 also identifies that six additional vessels, currently associated with qualifying LLP licenses, are within 10 percent of the identified thresholds.

**Table 3 Length, tonnage and horsepower of vessels named on the 37 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses, compared to AFA/MARAD restrictions**

Restriction	Number of vessels exceeding threshold	Number of vessels within 10% of threshold	Build year				
			1936–1945	1966–1975	1976–1985	1986–1995	1996–2005
>165 feet	6	5					
>750 gross tons	8	2					
>3,000 shaft horsepower	0	0					
<b>Total number of unique vessels</b>	9		6		2		1
		6*	3	1	1	1	

\*Note, total represents unique vessels in addition to those already exceeding a threshold.

Source: AKFIN Vessel Table and NMFS Restricted Access Management data, compiled by AKFIN, May 2012.

### 1.5.4 Pacific cod catch by the Freezer Longline Sector

Since 1994, the BSAI Pacific cod ITAC<sup>9</sup> has been allocated among sectors. The BSAI Pacific cod longline catcher/processor subsector has had a direct allocation of Pacific cod since 2000. In 2002, NMFS published a final rule to implement Amendment 67 to the BSAI FMP, which established a Pacific cod endorsement on qualifying LLP licenses (67 FR 18129, April 15, 2002). In addition, Amendment 67 restricted fixed gear vessels greater than or equal to 60 feet (18.3 m) from participating in the BSAI Pacific cod fishery, unless those LLP licenses qualified for a Pacific cod endorsement, based on historical participation. Similarly, LLP license endorsements were established for gear type (longline or pot) and operation type (catcher vessel or catcher/processor), further limiting entry to participants with historical participation in the fishery. Since the implementation of Amendment 85 in 2008, the freezer longline sector has been allocated 48.7 percent of the BSAI Pacific cod ITAC (72 FR 50788, September 4, 2007). Table 4 shows the sector’s allocation and catch from 2004 through 2012. In years preceding 2008, the freezer longline sector regularly received rollovers from other sectors that were unable to take their full allocation. One objective of Amendment 85 was to respecify the cod sector allocations to accurately reflect the proportion of quota that was annually harvested by the different sectors.

Table 4 also summarizes information on the number of vessels participating in the Pacific cod target fishery over the years 2004 to 2012 (through April 29, 2012), and the proportion of Pacific cod that was

<sup>8</sup> Measured at the waterline

<sup>9</sup> ITAC is equal to the total allowable catch (TAC), minus the 10.7 percent community development quota (CDQ) allocation. Note also that a 3 percent deduction from acceptable biological catch is made before calculation of the TAC, to accommodate the State of Alaska Aleutian Islands Pacific cod guideline harvest level.

retained by the fleet, both in the target and Western Alaska Community Development Quota (CDQ) fisheries. The number of vessels that fished Pacific cod on one of the 36 LLP licenses that compose the sector, ranged between 30 in 2011, and 33 in the years 2007 through 2010. For years for which a complete year of data is available, retained harvests range from about 80,000 mt in 2007, to about 135,000 mt in 2011. About half of the vessels in the sector also fish Pacific cod for the CDQ groups. Since the implementation of Amendment 49 to the BSAI FMP in 1998, there has been a 100 percent retention requirement for Pacific cod in the BSAI, regardless of how or where it is caught (62 FR 63880, December 3, 1997). Only fish not fit for human consumption can be legally discarded.

**Table 4 BSAI Pacific cod allocation and catch data for vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses**

Year	Pacific cod catch in BSAI catcher/processor hook-and-line target				Pacific cod catch in CDQ target by BSAI hook-and-line catcher/processors		
	Sector allocation <sup>1</sup>	Number of vessels	mt	% retained	Number of vessels	mt	% retained
2004	80,930	31	93,439	98.3	16	12,999	97.8
2005	77,344	31	101,225	97.6	15	12,499	97.9
2006	71,218	32	91,074	98.2	16	13,232	97.2
2007	64,030	33	80,476	98.1	16	11,473	97.5
2008	73,844	33	93,671	98.4	16	16,846	97.9
2009	76,375	33	103,818	98.3	16	17,041	97.2
2010	73,000	33	98,560	98.1	14	17,874	97.7
2011	98,733	30	134,921	98.4	13	20,198	98.3
2012 <sup>2</sup>	113,106	28	64,226	98.7	9	8,918	99.0

<sup>1</sup>At beginning of year, does not include rollovers.

<sup>2</sup>Catch through April 29, 2012

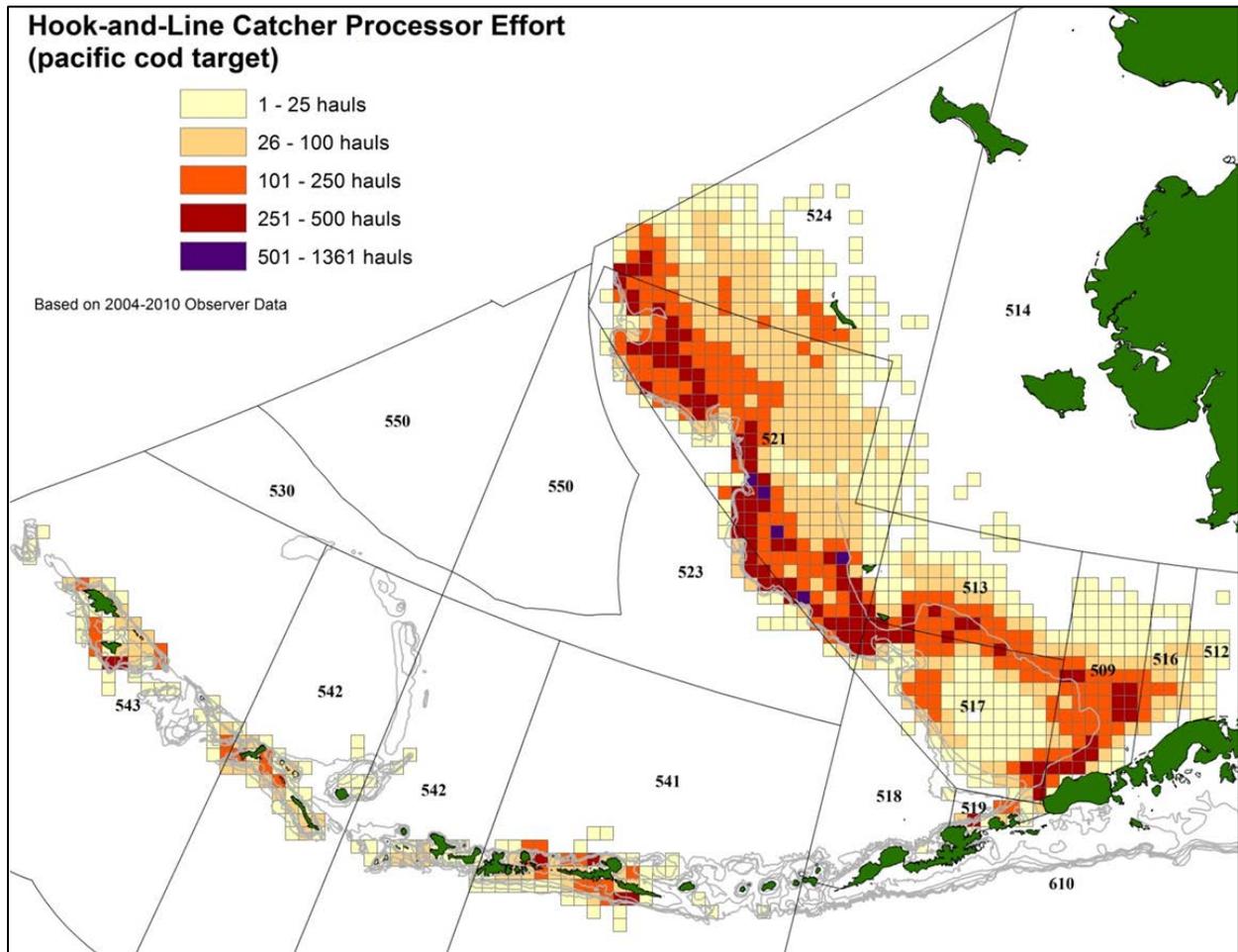
Source: NMFS Catch Accounting data, compiled by AKFIN, May 2012.

#### 1.5.4.1 Spatial and temporal distribution of freezer longline Pacific cod harvests

Most Pacific cod fishing activity in the Bering Sea and Aleutian Islands by freezer longliners occurs along the continental shelf break, in the Bering Sea (Figure 1), and especially along the area of the break to the west and north of the Pribilof Islands. Figure 1 shows other activity taking place along the Aleutian Islands, although Steller sea lion protection measures, which became effective in the 2011 season, limit activity in Areas 541 and 542, and eliminate it in Area 543.

The BSAI target fishery is divided into two regulatory seasons, January 1 to June 10, and June 10 to December 31. In past years, the freezer longliners generally began fishing for Pacific cod on January 1, and continued until the allocation was fully harvested by February, March, or April. They then started fishing Pacific cod again from August 15, when the next halibut PSC allowance became available, through November or December. Since the implementation of the voluntary fishery cooperative, beginning with the B season in 2010 (August 15), the seasons have remained open throughout the regulatory period, presumably because the cooperative allows vessels to spread out harvests. Also in 2011, the harvest specifications for halibut prohibited species catch (PSC) in this fleet were modified to release halibut PSC on June 10 and August 15.

**Figure 1** Locations of freezer longline hauls in the Bering Sea and Aleutian Islands for the years 2004 through 2010



#### 1.5.4.2 Pacific cod product types

The freezer longline fleet primarily produces headed and gutted products. *Sector and Regional Profiles of the North Pacific Groundfish Fisheries* (Northern Economics 2001) cites the reasons for this vessel class producing only headed and gutted products as due to load line regulations and a lack of space to accommodate additional crew and equipment. These vessels are able to produce relatively high-value products that compensate for the relatively low catch volumes associated with longline gear. Most of these vessels are steel-hulled, shelter-decked, and predominantly schooner in style. Most vessels are equipped with automatic baiting machines that enable them to bait and haul about 30,000 to 40,000 hooks per day. Below deck, these vessels are set up with heading and gutting machines, plate freezers, and lower level freezer holds for their frozen products. Generally, these vessels are not built to standards that would permit them to be load line certified—a designation that requires certain standards for production on a vessel. Without load line certification, a processing vessel cannot produce fillets.

Production capacity is directly related to vessel length and overall vessel design—larger vessels can accommodate larger freezer holds that allow vessels to stay at sea for longer periods. Larger vessels also allow more processing and automated baiting equipment to be installed, which can be optimally located to increase overall daily throughput.

The most important Pacific cod products processed by this fleet are frozen eastern and western cut headed-and-gutted Pacific cod (Table 5). The table shows the different product types processed by vessels in the freezer longline sector, as well as total production by these vessels from 2003 to 2012 (through April 29). Under the 100 percent retention requirement, all Pacific cod that is fit for human consumption must, at a minimum, be processed into a primary product, as defined in the regulations. The product recovery rate described in the table is the NMFS estimate of the approximate proportion of total round weight represented by each product type. Over the years 2008 through 2010, eastern cut accounted for between 63 percent and 83 percent of headed-and-gutted production, and western cut accounted for between 17 percent and 37 percent. Over these years, both together accounted for greater than 95 percent of total output weight. Other primary products included whole or bled Pacific cod, and ancillary products such as roe, pectoral girdles, heads, cheeks, chins, belly flaps, milt, stomachs, and “other” products.

**Table 5 Pacific cod production, by product type, for the combined years 2003 to 2012, for the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses**

Product type		NMFS product recovery rate	Total production by these vessels, 2003-2012 (mt)
Primary	Headed & gutted, Eastern cut (J-cut). Head removed just behind the collar bone.	0.47	308,714
	Headed & gutted, Western cut. (Collar bone on, or CBO). Head removed just in front of collar bone.	0.57	118,542
	Whole fish/food fish.	1.00	2,409
	Gutted, head on	0.85	943
	Headed & gutted, with roe	0.63	51
	Bled only	0.98	45
Ancillary	Stomachs	none specified; industry estimates up to 0.07	6,375
	Roe	0.05	3,556
	Collar bones (pectoral girdle)	0.05	3,991
	Milt	none specified; industry estimates 0.04	735
	Heads	none specified; industry estimates 0.27	713
	Chins	none specified	121
	Cheek	0.05	109

Source: NMFS product recovery rates, Table 3 to 50 CFR part 679, accessed May 15, 2012. Industry estimates from K. Down, Freezer Longline Conservation Cooperative personal communication, May 14 2012. Total production from NMFS Weekly Production Report data, compiled by AKFIN, May 2012.

One advantage of vessel replacement is that the factory in a new vessel can be purpose-built to utilize additional processing lines for ancillary products. Table 6 compares the relative production of primary versus ancillary Pacific cod products by qualifying vessels, categorized both by vessel length and by vessel age. No difference in relative production is apparent across vessel length, but the data suggest that vessel age may impact the ability of a vessel to process ancillary products. A vessel operator’s choice of product type mix is likely much more complicated, however, and involves many factors that are not easily captured in the available data.

**Table 6 Relative production of primary and ancillary Pacific cod product types for the combined years 2003 to 2012, by vessel length and year built, for the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses**

LOA	Primary		Ancillary		Year built	Primary		Ancillary	
	mt	% of total	mt	% of total		mt	% of total	mt	% of total
107' to 124'	135,536	96.3	5,197	3.7	1935 to 1946	121,029	97.6	2,932	2.4
135' to 141'	89,668	96.5	3,248	3.5	1966 to 1985	120,220	96.6	4,219	3.4
150' to 174'	161,491	96.6	5,730	3.4	1986 to 2005	189,474	95.7	8,459	4.3
180'	44,028	96.8	1,435	3.2					

Source: NMFS Catch Accounting data, compiled by AKFIN, May 2012.

### 1.5.5 Incidental catch in the Pacific cod hook-and-line catcher/processor target fishery

Table 7 contains estimates of the incidental catch (i.e. non-target groundfish species that are retained) of species in the BSAI Pacific cod hook-and-line catcher/processor target fishery, by the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses. The table only includes estimates of the most significant incidental catches. In general, most of the pollock is retained as incidental catch and a smaller portion is discarded as bycatch, while a smaller proportion of skates, arrowtooth flounder, and rockfish species are retained as incidental catch and a larger portion of these species are discarded as bycatch.

**Table 7 Incidental catch by the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses, and proportion of each non-target groundfish species that are retained.**

Year	Arrowtooth		Pollock		Skates		Rockfish	
	mt	% retained	mt	% retained	mt	% retained	mt	% retained
2004	1,209	6.9	4,494	85.4	13,413	24.2	125	21.7
2005	1,487	37.0	3,624	85.3	16,493	31.8	80	32.8
2006	1,162	28.8	2,782	83.4	12,031	25.4	69	23.7
2007	1,308	17.7	3,264	81.9	10,400	28.1	144	21.9
2008	1,776	19.0	5,118	80.5	14,026	32.0	202	24.8
2009	1,841	14.0	4,510	84.7	12,354	25.0	217	25.6
2010	1,788	17.4	4,686	80.1	12,171	32.5	400	45.9
2011	1,471	17.6	6,218	84.3	18,590	21.6	102	36.9
2012	193	1.5	1,988	90.8	7,936	20.4	30	25.0

Source: NMFS Catch Accounting data, compiled by AKFIN, May 2012.

Table 8 and Table 9 focus exclusively on skates retained as non-target groundfish species in the Pacific cod target fishery. For 2009 to 2011, the tables examine skate retention by vessel length, and by age of vessel, respectively. In Table 8, it is evident that there is no apparent trend in skate retention by vessel size class. Table 9 shows that, especially for 2009 and 2010, there appears to be a lower retention rate of skates by operators of vessels built between 1936 and 1945.

**Table 8 Skate retention as non-target groundfish in the Pacific cod fishery, by vessel length, for the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses**

LOA	Year	Number of vessels	Skates (mt)	% skate catch retained
107' to 124'	2009	12	2,685	32.8
	2010	12	2,731	41.5
	2011	11	2,529	31.1
135' to 141'	2009	6	3,579	14.9
	2010	6	3,442	26.8
	2011	6	6,554	16.3
150' to 174'	2009	11	4,652	29.9
	2010	11	4,715	35.6
	2011	10	8,376	22.7
180'	2009	4	1,437	19.5
	2010	4	1,282	17.2
	2011	3	1,131	23.2

Source: NMFS Catch Accounting data, compiled by AKFIN, May 2012.

**Table 9 Skate retention as non-target groundfish in the Pacific cod fishery, by age of vessel, for the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses**

Year built	Year	Number of vessels	Skates (mt)	% skate catch retained
1936–1945	2009	10	3,322	20.8
	2010	10	3,281	23.8
	2011	7	3,790	22.8
1966–1985	2009	11	2,825	27.0
	2010	11	2,243	30.6
	2011	11	4,091	21.8
1986–2005	2009	12	6,207	26.3
	2010	12	6,647	37.4
	2011	12	10,709	21.1

Source: NMFS Catch Accounting data, compiled by AKFIN, May 2012.

### 1.5.6 Other BSAI target fisheries for this fleet

Table 10 provides estimates of other groundfish species targeted by this fleet. Sablefish TACs have declined in recent years, compared to highs of the mid 2000s, which accounts for lower catch levels in recent years. Some of the vessels also target halibut; however, halibut is not considered a groundfish and is not managed under the BSAI FMP. The longline target fishery for both sablefish and halibut is managed through an individual fishing quota (IFQ) system. Any increased capacity that may result from the proposed action would, therefore, not directly affect other participants in the directed sablefish or halibut fisheries. In addition, any effect on the IFQ market would be limited to shares that could be fished on large vessels and freezer longliners.

There are currently four eligible vessels that actively target Greenland turbot in the BSAI. The target fishery is limited access, and is prosecuted by catcher/processors, mainly from the freezer longline or Amendment 80 sectors. There are currently no prohibitions on vessels participating in the fishery, so it is possible that increasing capacity under Alternatives 2 or 3 may result in an increase in activity in the Greenland turbot fishery. The Council has initiated an analysis to look at allocating the Greenland turbot TAC between fixed gear and trawl gear, in the absence of successful negotiations between the Freezer Longline Conservation Cooperative (FLCC) and the Amendment 80 cooperatives.

**Table 10 Other BSAI groundfish targeted by the vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses**

Year	Sablefish		Greenland turbot		Pacific cod targeted with pot gear (mt)
	mt	% retained	mt	% retained	
2004	1,643	96.2	1,305	96.3	*
2005	1,926	97.3	1,569	97.0	0
2006	1,758	96.7	1,360	94.9	*
2007	1,669	98.8	1,433	91.5	0
2008	1,189	97.8	756	89.7	*
2009	1,024	96.5	1,341	95.8	*
2010	841	95.9	2,035	98.0	1,541
2011	778	96.8	1,948	99.0	*
2012 <sup>^</sup>	130	99.1	7	71.9	*

\* data are confidential

<sup>^</sup> 2012 annual data are incomplete, includes catch through April 29, 2012.

Source: NMFS Catch Accounting data, compiled by AKFIN, May 2012.

As part of Amendment 85 to the BSAI FMP, NMFS and the Council established Pacific cod endorsements on LLP licenses (72 FR 50788, September 4, 2007). In addition, LLP license holders that were eligible to longline as either catcher/processors or catcher vessels had to make a permanent, one-time selection as to whether their Pacific cod catch would accrue against the catcher/processor or catcher vessel hook-and-line sector allocation. Consequently, any increased capacity that may result from the proposed action would not impact the Pacific cod hook-and-line catcher vessel sector. There is also a State-water fishery for Pacific cod in the Aleutian Islands, but hook-and-line vessels participating in that fishery may not exceed 58 feet (17.7 m) LOA, so none of the vessels in this sector are eligible.

With respect to the Pacific cod pot fishery in the BSAI, there are three qualifying LLP licenses that are also endorsed to target Pacific cod. Additionally, vessels may participate in the AI parallel waters Pacific cod fishery with pot gear (i.e., fishing off the Federal TAC, but within State waters) regardless of whether they have a Pacific cod pot gear endorsement on their LLP license. Also, at certain times of the year, pot vessels less than 125 feet (38.1 m) LOA may participate in the State-waters Pacific cod fishery in the Aleutian Islands. Table 10 illustrates the catch of Pacific cod with pot gear by vessels associated with the qualifying LLP licenses, from 2004 through 2012. The table includes any Pacific cod catch by qualifying vessels, whether from the Federal, parallel, or State fishery. Four unique vessels targeted Pacific cod with pot gear over the time period, of which two vessels were designated on LLP licenses that are endorsed for Pacific cod pot gear. The vessel associated with one LLP license has shown a fairly consistent participation in the pot cod fishery, fishing in five out of the nine years. The vessel associated with another of the pot-endorsed LLP licenses fished in three of the most recent four complete years, but not in the Federal fishery (therefore, no catch is associated with the LLP pot cod endorsement). The other two vessels that fished for Pacific cod with pot gear are not endorsed for pot fishing on their LLP licenses, and fished exclusively in the parallel waters or State fishery.

Some vessels in the freezer longline sector may also participate in other, fishery-related activities during the course of the year; for example, tendering or processing salmon during the summer. NMFS does not presently compile data on these activities.

### 1.5.7 Participation in GOA fisheries by BSAI freezer longline vessels

A subset of vessels in the BSAI freezer longline fleet also fish Pacific cod in the GOA, along with three freezer longliners that fish exclusively in the GOA. The Council's fixed gear recency action (Amendment 86) has limited the number of participants in this sector by adding gear-specific Pacific cod endorsements

to fixed gear LLP licenses (76 FR 15826, March 22, 2011). Moreover, the implementation of Pacific cod sector allocations under Amendment 83 (76 FR 74670, December 1, 2011) has encouraged negotiations to create a cooperative for the Western and Central GOA Pacific cod catcher/processor subsector to include LLP licenses that are exclusively endorsed for the GOA, as well as those that are also endorsed for the BSAI, including vessels participating as part of the FLCC. Although this action is specific to LLP licenses that are endorsed for the BSAI, the potential impact of larger vessels being able to participate in the GOA Pacific cod fishery is an important consideration in the analysis.

Table 11 shows the number of LLP licenses with Pacific cod hook-and-line catcher/processor endorsements for the Bering Sea and Aleutian Islands that also have endorsements in the GOA.

**Table 11 Number of BSAI Pacific cod hook-and-line catcher/processor LLP licenses with GOA fixed gear Pacific cod endorsements**

Maximum length overall	Number of qualifying licenses that are also endorsed for the GOA	Range of vessel lengths for GOA-endorsed vessels	GOA Pacific cod endorsements			
			Hook-and-line		Pot	
			Central GOA	Western GOA	Central GOA	Western GOA
124'	6	110' to 124'	5	4	-	-
125' to 149'	8	107' to 136'	8	4	-	-
150' to 174'	7	150' to 174'	6	2	-	1
175' to 185'	4	124' to 180'	2	4	-	-
185' to 199'	2	152' to 167'	1	2	-	-
<b>Total</b>	<b>27</b>		<b>22</b>	<b>16</b>	<b>0</b>	<b>1</b>

Source: AKFIN Vessel Table and NMFS Restricted Access Management data, compiled by AKFIN, May 2012.

As previously noted, there are also three freezer longline LLP licenses that are exclusively endorsed for Pacific cod fishing in the GOA. Two of these LLP licenses have a Western GOA hook-and-line Pacific cod endorsement, and one has a Central GOA hook-and-line Pacific cod endorsement. The three LLP licenses all have an MLOA of less than 124 feet (37.8 m), and the vessels currently named on the LLP licenses are considerably smaller than the MLOA on the licenses.

In the GOA, a sector allocation of Pacific cod TAC was implemented in January 2012. The Council recommended 19.8 percent of the Western GOA TAC and 5.1 percent of the Central GOA TAC be allocated to the GOA freezer longline sectors (vessels with a Pacific cod hook-and-line catcher/processor endorsement on their LLP license for either the Central GOA or the Western GOA). The Pacific cod quota available to the longline catcher/processor subsector in the GOA is much smaller than the quota that is available in the BSAI. For example, in 2012, the allocation was 4,100 mt in the Western GOA, and 2,158 mt in the Central GOA, compared to 113,106 mt for the BSAI.

There is one qualifying LLP license that is endorsed for Pacific cod with hook-and-line gear the BSAI and for Pacific cod in the Western GOA with pot gear. Unlike in the Aleutian Islands, a vessel may not fish in the GOA parallel fisheries for Pacific cod, unless it is also endorsed to fish in the Federal Pacific cod fishery with that gear type. The vessel that is endorsed for the Western GOA pot cod catcher/processor fishery has shown consistent participation in that fishery the last four years.

Table 12 identifies the number of vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses that also reported Pacific cod catch in the GOA from 2004 through 2011. The table also shows the amount of catch by qualifying vessels, as well as GOA cod catch as a proportion of the total BSAI or GOA Pacific cod catch by those vessels. These percentages ranged from 2.7 percent in 2005, to 17.4 percent in 2010. Vessels that operate in both areas are significantly more dependent on production from the GOA than the average vessel in the fleet.

**Table 12 GOA Pacific cod fishing activity by vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses**

Year	Number of qualifying BSAI vessels with Pacific cod catch in GOA	Catch of GOA Pacific cod by qualifying BSAI vessels	GOA cod catch as proportion of total BSAI/ GOA cod catch for qualifying BSAI vessels
2004	13	4,374	10.50%
2005	10	837	2.70%
2006	17	3,383	6.90%
2007	18	4,498	9.10%
2008	15	4,644	10.00%
2009	17	4,467	8.60%
2010	17	7,525	17.40%
2011	11*	8,187	12.50%
2012	6*	N/A	N/A

Source: NMFS Catch Accounting data, compiled by AKFIN, May 2012.

\* NMFS Catch Accounting data May 2013

As in the BSAI, the BSAI freezer longline vessels also target sablefish in the GOA. Table 13 identifies GOA sablefish catch, by qualifying BSAI freezer longline vessels, and the number of these vessels that reported sablefish catch in the GOA during 2004 to 2011. Sablefish TACs have declined in recent years, compared to highs of the mid 2000s, which accounts for lower catch levels in recent years. The sablefish fishery is managed with an individual fishing quota system; therefore, any increased capacity that may result from the proposed action would not affect other participants in the directed sablefish fishery.

**Table 13 GOA sablefish catch by vessels named on the 36 qualifying BSAI Pacific cod hook-and-line catcher/processor-endorsed LLP licenses**

Year	Catch of GOA sablefish by qualifying BSAI vessels	
	Number of vessels	mt
2004	11	1,454
2005	14	1,606
2006	19	1,375
2007	15	1,366
2008	10	948
2009	11	754
2010	11	562
2011	12	658

Source: NMFS Catch Accounting data, compiled by AKFIN, May 2012.

### 1.5.8 Freezer Longline Conservation Cooperative (FLCC)

Since 2006, most of the holders of LLP licenses endorsed as Pacific cod hook-and-line catcher/processors in the BSAI have been members of the voluntary FLCC. In June 2010, the remaining LLP license holders joined the cooperative, so that with the start of the 2010 B season on August 15, all holders of LLP licenses authorizing the use of these vessels were members of the cooperative. Each year, an allocation is made to the BSAI freezer longline catcher/processor subsector through the annual harvest specifications process. FLCC members each receive a share of the quota for harvest; shares are issued in proportion to

historical fishing activity associated with each LLP license. FLCC members are free to exchange their quota shares among themselves and to stack quota shares on individual vessels. Compliance with the agreement is monitored by SeaState, Inc., and the contract, signed by the members, imposes heavy financial penalties for non-compliance. Dissolution of the cooperative requires the agreement of an 85 percent supermajority of LLP license holders.

For several years, FLCC members have also organized their GOA cod harvests, even without participation of all GOA harvesters, sufficiently to make reliable commitments regarding halibut PSC avoidance goals, which has affected whether NMFS has opened fisheries (NMFS 2011b). Beginning in 2012, long term allocations of the Western and Central GOA Pacific cod TACs to the GOA freezer longline sector, and provisions that limit entry to the directed GOA longline Pacific cod fishery, may provide opportunities for a GOA harvest cooperative. The FLCC is currently in negotiation with the holders of freezer longline LLP licenses that are exclusively endorsed for GOA Pacific cod.

### **1.5.9 Voluntary Vessel Buyback Program**

In 1996, in response to the finding that many U.S. fisheries have excess fishing capacity, Congress provided for fishing capacity reduction (buyback) programs. The intent of a program is to decrease the number of harvesters in the fishery, increase the economic efficiency of harvesting, and facilitate the conservation and management of fishery resources in each fishery in which NMFS conducts a reduction program. Typically, permit holders are paid to surrender their fishing permits, including relevant fishing histories for that fishery, or surrender all of their fishing permits, and cancel their fishing vessels' fishing endorsements, by permanently withdrawing the vessels from all fisheries. The cost of the program is paid either by the remaining harvesters, through a loan, or by taxpayers, through a direct appropriation from Congress. Section 312(b)–(e) (16 U.S.C. 1861a(b)–(e)) was added to the Magnuson-Stevens Act to authorize such programs. Congress also amended Title XI of the Merchant Marine Act, 1936 (Title XI), adding new sections 1111 and 1112 to finance capacity reduction costs. The Title XI provisions involving fishing capacity reduction loans have been codified at 46 U.S.C. 53735.

To implement capacity reduction programs, NMFS must publish regulations at subpart L to 50 CFR part 600, which contain a framework rule for buyback programs generally. For each individual program, NMFS promulgates regulations at subpart M to 50 CFR part 600 to implement the specific terms of that particular buyback.

In 2007, the FLCC organized the first voluntary fishing capacity reduction program in the sector. In response, NMFS promulgated regulations to implement a \$35.7 million fishing capacity reduction loan program for the longline catcher/processor subsector, which represented the full amount authorized for that subsector. This initial program removed three fishing vessels and 12 fishing licenses and permits, for a loan amount of \$35 million. All longline catcher/processors harvesting non-pollock groundfish were required to pay and forward a fee to NMFS to repay the loan.

In 2010, NMFS approved a second round of capacity reduction as authorized by the Appropriations Act. Members of the BSAI longline catcher/processor subsector informed NMFS that they wished to access the remaining loan amounts to undertake a second buyback. On August 27, 2010, the FLCC submitted a Reduction Plan to access \$2.7 million of the remaining funds. As noted in Table 1, the FLCC's Reduction Plan involved just one permit. NMFS established regulations to implement a second fishing capacity reduction program on September 24, 2012 (74 FR 58775). This action was completed in December 2012.

### 1.5.10 Markets

Pacific cod produced by the freezer longliners is ultimately sold in a wide variety of places (white tablecloth restaurants, fast food restaurants, food service operations in school and hospitals, grocery stores, in the United States or in foreign countries), and in a wide variety of product forms (fillets, sticks, portions, breaded or unbreaded, and salt cod) in addition to the ancillary products listed in Section 1.5.4.2).

The BSAI freezer longline vessels are primarily producing trays of frozen headed-and-gutted Pacific cod. This product is processed further, once it leaves the catcher/processor. Additional processing may take place in the United States. However, much of the processing takes place overseas. Pacific cod processed in second countries may be exported to third countries for consumption. For example, large Pacific cod produced from the Aleutian Islands may be shipped to Norway for further processing, and then shipped to Brazil for final processing and consumption as salt cod. Pacific cod receiving secondary processing overseas may be re-exported to the United States, for consumption.

### 1.5.11 Gross Revenues from fishing for Pacific cod

Table 14 provides estimates of average gross revenue, and the number of freezer longliners fishing for Pacific cod in from 2004 through 2010. Average gross revenue includes non-CDQ and CDQ, targeted and incidental, and BSAI and GOA Pacific cod first wholesale gross revenues. These gross revenues have been converted to constant 2010 dollars, to factor out the impact of inflation. Average revenue appears to have risen over most of the period, declined in 2009, then improved in 2010.

**Table 14 Average gross first wholesale revenue and number of vessels from BSAI and GOA Pacific cod for the BSAI freezer longline fleet**

Year	Number of vessels	Average revenue (\$)
2004	39	4,006,034
2005	39	4,845,300
2006	39	5,551,425
2007	37	5,662,278
2008	39	6,258,223
2009	38	4,260,433
2010	36	5,027,225

### 1.5.12 Safety Considerations

With the notable exception of the loss of the freezer longline vessel *Galaxy* in 2002, there have been no other vessel losses within the freezer longline sector between 2000 and 2010, and individual fatalities have been infrequent during this same time period. The freezer longline sector is, nevertheless, considered to be a high-risk activity, primarily due to the area in which these fish processing vessels operate, the average vessel age, the large number of crew on each vessel, and the potential for severe consequences, such as multiple loss of life, should a marine casualty occur. This section characterizes the operational risks associated with the work environment of this fleet, the fleet's fatality rates, the applicable safety regulations (including the Alternate Compliance and Safety Agreement discussed in detail below, Section 1.5.12.2), and the safety implications of vessel replacement.

### **1.5.12.1 Safety Concerns**

#### **Aging fleet linked to negative safety events**

A literature review found a few studies that evaluated the association of vessel age with the probability of a negative safety event. The first study reviewed U.S. Coast Guard accident investigations of non-fatal crew injuries, fatal crew injuries, and missing crew incidents on freight ships, tankers, and tugboats that occurred during 1991 through 2001. Authors found that fatal injuries on freight ships increased with vessel age (Talley et al. 2005). Another study from the British Shipbuilders Technology Department concluded that, in general, a positive relationship exists between ship casualty rates and ship age (Meek et al. 1985). Only one study was found that looked at the issue of age as a predictor for vessel losses and fatalities in the commercial fishing fleet. The authors found that an increase in vessel age increases the probability of a total loss, due to a collision, fire/explosion, material/equipment failure, capsizing, and sinking (Jin et al. 2001).

#### **High-risk / high consequence work environment**

Unlike catcher vessels, which catch fish and deliver fish in the round to shore plants, freezer longline processing vessels have added hazards because they catch, sort, head, eviscerate, clean, and process fish into various fish products on board the vessel. To conduct these operations, these vessels have large crew complements, ranging from 15 to 25 people, with an average size of 19 crew members. In contrast, the size of a typical catcher vessel crew ranges between 4 and 6 people. The majority of the crew on freezer longline vessels are not professional mariners, but instead are fish processing workers. In addition to large crews, these vessels carry processing and freezing machinery, hazardous gases for refrigeration, and large amounts of flammable packaging materials that pose hazards that do not exist on catcher vessels. The freezer longline vessels typically operate from January through May, and then from July through November, with some vessels extending their seasons through December. However, in 2011, it appears likely that the fishing season will extend to cover the entire year, due to slower harvest rates and halibut PSC availability. Because of their ability to freeze, package, and store frozen catch, these vessels can operate in the most remote areas of the BSAI region for extended periods of time, hours away from search and rescue support.

#### **History of fatalities and fatality rates**

Since 1990, the National Institute for Occupational Safety and Health (NIOSH), Alaska Pacific Regional Office, has monitored safety performance of individual fishing fleets throughout Alaska. NIOSH collects information for each fatality that occurs in the fishing industry, and also estimates the size of the work force for each fleet, to calculate rates and make comparisons across fleets. Fatality rates are calculated by dividing the number of fatalities by the estimated workforce. These workforce estimates are based on the number of vessels operating, the number of days the vessel is at sea, and the number of crewmen on board. Based upon these variables, the freezer longline fleet had an average annual fatality rate of 117 per 100,000 workers per year, from 2000 through 2009. In comparison, the average annual fatality rate for the entire fishing fleet operating in and off Alaska was 109 per 100,000 workers per year, from 2000 through 2009. Table 15 is a summary of all fatalities occurring on freezer longline vessels since 2000.

During 2000 through 2010, there has been one major vessel loss in this fleet, the F/V *Galaxy*. The loss of the *Galaxy* demonstrated the significant consequences resulting from a large crew having to abandon a vessel. The risks for high numbers of fatalities increase if crews are forced to abandon ship. Other fatalities within this freezer longline fleet are caused by falls overboard and industrial injuries occurring in the processing spaces.

**Table 15 Fatalities on freezer longline catcher/processor vessels, 2000 through 2010**

Year	Fatality Type	# of Fatalities	# Crew at risk	Vessel Length (in feet)
2002	Vessel Loss	3	26	180
2002	Fall Overboard	1	1	161
2002	Fall Overboard	1	1	166
2003	Fall Overboard	1	1	124
2008	On-board Injury	1	1	137
2008	On-board Injury	1	1	124
2010	On-board injury	1	1	137

#### **1.5.12.2 Review of Freezer Longline Fleet Safety Regulations**

Safety regulations for commercial fishing industry vessels are largely based upon the function of the vessel. More specifically, existing U.S. Coast Guard safety regulations make a significant distinction between a fishing vessel (a vessel which catches fish), and a fish processing vessel, which is a vessel that “commercially prepares fish or fish products, other than by gutting, decapitating, gilling, skinning, shucking, icing, freezing or brine chilling.” The most stringent safety regulations of vessel classification and load line are reserved for fish processing vessels, built after July 1991. A vessel that does not prepare fish beyond these eight statutory limitations is regulated to a significantly lesser degree as a “fishing vessel,” in accordance with 46 U.S.C. 2101(11a).

Prior to 2006, the U.S. Coast Guard enforced the safety regulations for the freezer longline fleet (as well as the freezer trawl fleet) as if they were “fishing vessels” that produced headed-and-gutted products, as described in Table 16, Column A. In terms of required safety equipment, this designation as a fishing vessel meant that these vessels only had to meet minimal standards for primary lifesaving and fire-fighting equipment, but were not required to be classed or load lined.

The formal U.S. Coast Guard investigations into the loss of the Arctic Rose (2001) and Galaxy (2002) found most freezer longline and freezer trawl vessels were actually operating (and had been operating for some time) as “fish processing vessels,” and were producing fish products that were only allowed on classed and load lined vessels (Table 16, Column C). Due to a vessel age limitation of 20 years, imposed by the classification societies of Det Norske Veritas and American Bureau of Shipping, the vast majority of the freezer longline fleet could not be either load lined or classed, unless that vessel was already constructed to class and load line standards. In other words, freezer longline vessels built before 1992 cannot be classed and load lined. A summary of the freezer longline fleets age and length is provided in Table 2.

**Table 16 Fish processing products allowed on various types of fishing vessels**

	Column A: Head and Gut Fish Products Allowed for Fishing Vessels	Column B: Fish Processing Products Allowed on ACSA Vessels	Column C: Fish Processing Products Allowed on Classed/ Load lined Vessels
Whole Fish (for) Meal	X	X	X
Bled Only	X	X	X
Bled Fish destined for Meal	X	X	X
Gutted, Head On	X	X	X
Gutted, Head Off	X	X	X
Head & Gutted with Roe	X	X	X
Headed & Gutted, Western Cut	X	X	X
Headed & Gutted, Eastern Cut	X	X	X
Wings	X	X	X
Mantles, Octopus or Squid	X	X	X
Headed & Gutted, Tail Removed		X	X
Kirimi (Steak)		X	X
Roe		X	X
Pectoral Girdle		X	X
Heads		X	X
Chins		X	X
Cheeks		X	X
Milt		X	X
Stomachs		X	X
Salted and Split			X
Belly Flaps			X
Filletts with Skin & Ribs			X
Filletts with Skin, No Ribs			X
Filletts, Skinless / Boneless			X
Filletts, Deep Skin			X
Surimi			X
Minced			X
Fish Meal			X
Fish Oil			X
Butterfly, No Backbone			X
Bones			X

ACSA = Alternate Compliance and Safety Agreement

### Alternate Compliance and Safety Agreement

Because of this inability to meet current safety regulations of load line and classification, the U.S. Coast Guard and owners of freezer longline (and freezer trawl) vessels collaborated to develop an alternative program to address the safety risks of this fleet.<sup>10</sup> This collaborative effort is known as the Alternative Compliance and Safety Agreement (ACSA). ACSA development began in June 2005 and was implemented between June 2006 and January 2009. The ACSA program is designed to achieve a similar level of safety as classification and load line provide and, in certain ways, exceeds the standards of classification and load line. However, it is important to note that, because most freezer longline vessels were not constructed to meet the requirements of classification and load line, there are some inherent limitations in achieving a total safety equivalency.

ACSA has both a preventative safety regime, as well as a reactive one. Preventative safety components of the ACSA program focus on maintaining hull condition and watertight integrity, preventing down flooding, ensuring adequate vessel stability, and requiring fire detection and suppression systems. ACSA also requires regular maintenance for machinery and critical piping systems. Reactive safety components of ACSA include enhanced emergency training, improved lifesaving equipment, and additional firefighting capabilities for the vessel and crew. These standards are enforced through mandatory annual inspections and regular drydock examinations (twice in five years).

<sup>10</sup> U.S. Coast Guard, Exemption Letters for Existing Fish Processing Vessels. G-PCV Policy Letter 06-03 dated July 1, 2006.

To meet the requirements of the statutory language under the ACSA program, fishing vessels and freezer longline vessels not in compliance with ACSA are limited to producing only those fish products described in Table 16, Column A. Freezer longline vessels that are ACSA-compliant are allowed to produce fish products that exceed the statutory definition of fish processing, as outlined in Column B. Products considered to be “extensive processing” are only allowed on classed and load lined fish processing vessels, or fish processing vessels that meet grandfathering provisions found in existing regulations (Column C).

### Statutory requirements for large vessels

There are also several statutory requirements that apply to the operation of all larger vessels (greater than 135 feet [41.1 m] in length) and vessels with larger fish processing crews (greater than 16 fish processing workers). These additional safety and crewing requirements, and their regulatory thresholds, are provided in Table 17.

**Table 17 Statutory requirements for large vessels and fish processing vessels**

Description	Regulatory Trigger	Safety Improvements
Licensed Masters, Mates & Engineers	>200 Gross Tons (~135' MLOA)	Professionally Trained, Licensed Crew
Watch Keeping	> 16 Processing Workers	Work Hour Limitations for Wheelhouse & Engine Room
Able-bodied Seamen	> 16 Processing Workers	Additional formal training & competency

### Summary of safety regulations for freezer longline vessels

With the inclusion of the ACSA program, freezer longline vessels will generally fall into sub-categories, with different safety regulations that must be followed. These are described below and are found in Table 18 on a continuum of safety regulations from most lenient to the most robust.

- **Fishing Vessel (Headed and Gutted Products Only):** A vessel under this safety regime is only required to meet safety standards at 46 CFR 28 subparts A through C. These fishing vessels may only produce those products found in Table 16, Column A. These grandfathering provisions will expire in July 2020, at which time these vessels will either have to be replaced with newly constructed fish processing vessels or will have to meet ACSA standards, as previously described.
- **Fish Processing Vessel (built before 1991):** A vessel under this safety regime is required to meet safety standards at 46 CFR 28 subparts A through C and is also required to be examined by a U.S. Coast Guard third party surveyor every two years. These fish processing vessels have no processing limitation and may produce any product described in Table 16. Two freezer longline vessels fall into this category. These grandfathering provisions will expire in July 2020 at which time these vessels will either have to be replaced with newly constructed fish processing vessels or will have to meet ACSA standards as previously described.
- **ACSA-enrolled Vessels:** These vessels are neither classed, nor load lined, but they produce fish products which classify them as “fish processing vessels.” To continue to be allowed to produce fish products in Table 16, Column B, these vessels must be in compliance with the ACSA program. The present action includes 22 freezer longline vessels that fall into this category. These vessels are also required to meet standards at 46 CFR 28 subparts A through C, as well as standards at 46 CFR 28.710.
- **ACSA-enrolled & Load lined:** These freezer longline fish processing vessels are not classed, but do have a current load line. They produce fish products that classify them as “fish processing vessels.” To continue to be allowed to produce fish products in Table 16, Column B, these vessels must be in

compliance with the ACSA program. The present action includes six freezer longline vessels that fall into this category. In addition to meeting requirements for load line, they are also required to meet standards at 46 CFR 28 subparts A through C, as well as standards at 46 CFR 28.710.

- **Vessels with Classification and Load line:** These freezer longline vessels are fish processing vessels that were built or converted for use as a fish processor after 1991. These vessels represent the highest safety standards for fish processing vessels in the United States. There are no regulatory limitations on the products that may be made by these vessels, including any product listed in Table 16. The present action includes three freezer longline vessels that are classed and load lined.
- **Newly-constructed Fish Processing Vessel:** A newly-constructed fish processing vessel must be load lined and classed, and must meet additional safety, stability, and manning requirements that apply to vessels constructed after 1991.

**Table 18 Safety regulations applying to freezer longline vessels.**

Note, the columns represent a continuum (from left to right) of the most lenient to the most robust safety regulations.

Type of Vessel	46 CFR 28 Subparts A-C <sup>1</sup>	46 CFR 28 Subpart F <sup>2</sup>	ACSA Program	Load line 46 U.S.C. 5101 <sup>3</sup>	Class 46 U.S.C. 4503 <sup>4</sup>	46 CFR 28 Subpart D <sup>5</sup>	46 CFR 28, Subpart E Damage Stability <sup>6</sup>	Current Number of Vessels
Headed-and-Gutted Fishing Vessel	X							0
Pre-1991 Fish Processing Vessel	X	X						2
ACSA Vessel	X	X	X					22
ACSA Vessel w/ Load line	X	X	X	X				6
Classed & Load lined Vessel	X	X		X	X	X	X	2

<sup>1</sup> All fishing and fish processing vessels, regardless of type, must be in compliance with 46 CFR 28, subparts A–C. These regulations require the carriage of primary lifesaving equipment.

<sup>2</sup> All fish processing vessels, except for headed-and-gutted vessels, must meet the requirement of passing a mandatory compliance examination every two years to confirm compliance with safety standards.

<sup>3</sup> A load line is an international shipping safety convention that establishes standards for hull construction, watertight integrity, vessel stability, and maximum loading. Load lined vessels are required to successfully complete annual surveys, and dry dockings every fifth year. Fish processing vessels built after 1974, or converted for use as a fish processor after 1983, must be load lined.

<sup>4</sup> Vessel classification is an international shipping safety convention that establishes standards for design and installation of propulsion, electrical, and refrigeration machinery, electrical wiring and distribution, and critical piping. Additionally, classification establishes standards for structural fire protection and other fire prevention measures. Classed vessels are required to complete annual surveys. Classed vessels are almost always load lined. All fish processing vessels built or converted for use as a fish processor, after July 1990, must be classed.

<sup>5</sup> All commercial fishing vessels that carry more than 16 people on board, that are built or have undergone a major conversion after September 15, 1991, must meet additional safety requirements found in 46 CFR 28 subpart D.

<sup>6</sup> All commercial fishing vessels constructed after September 15, 1991, must meet additional safety requirements for damage stability, found in 46 CFR 28 subpart E.

### 1.5.13 New vessels entering the fishery under the status quo

There are two new freezer longline vessels that are currently being built for use in this fishery. One will be used with an LLP license that is currently not in use (but is stacked with another LLP license on a vessel owned by the company), and which has a larger MLOA. The vessel has been designed to be within the current regulatory requirements of the LLP license’s MLOA, and the AFA “large vessel” limitations of 165 feet (50.3 m) registered length (measured at the waterline) and 750 gross registered tons.

In the second instance, a smaller vessel is also being built for use in the fishery. At 136 feet (41.5 m) LOA, the new vessel still represents a slight increase in length, compared to the majority of the company’s other vessels (at 124 feet [37.8 m] LOA). The vessel will have the capacity to do new product

types, other than just head-and-gut. Restricted under current regulations, the company is making arrangements to obtain an LLP license with a larger MLOA to use with the vessel.

## **1.6 Potential Effects of the Alternatives**

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

Under Alternative 1 (status quo), vessel owners are able to rebuild or replace their vessels. They are, however, limited by the MLOA of the LLP license with which the vessel is used. In addition, the size of a rebuilt or replaced vessel is also limited by the “large vessel” restrictions of the AFA. Freezer longline vessels that are rebuilt or newly built (1) at greater than 165 feet (50.3 m) in registered length,<sup>11</sup> or (2) in excess of 750 gross registered tons, or (3) with engines capable of producing 3,000 shaft horsepower or greater, will not receive a Federal fisheries endorsement, and, therefore, these vessels could not be used with an existing freezer longline LLP license, even if the MLOA were not a constraint.

#### **MLOA restriction**

Both the LLP and the AFA restrictions were designed to stabilize capacity in the fisheries. The MLOA was originally instituted in 1995, under the Council’s groundfish vessel moratorium program. It was an initial step to freeze the growth in capacity in the groundfish fisheries,<sup>12</sup> while the Council developed long-term, comprehensive management programs. Since that time, the Council has enacted many changes to the groundfish fisheries, and particularly the freezer longline sector, which have dramatically changed the character of the fishery. The requirement for an LLP license, and subsequently a requirement for a gear- and operation-specific Pacific cod endorsement, limited the overall number of participants in the sector. The Council has also given the sector a direct allocation of Pacific cod, in both the BSAI and the GOA, which provides an overall limit to Pacific cod catch by this sector, and has also allowed the sector to form a voluntary cooperative. The primary longline target fisheries that these vessels could participate in are for sablefish and Greenland turbot. Capacity is already restricted in the sablefish fisheries through individual fishing quotas. Greenland turbot is primarily targeted by either longline or Amendment 80 catcher/processors, and the Council has initiated an analysis to look at allocating the Greenland turbot TAC between fixed gear and trawl gear. With these various constraints, it appears that there are now other, focused management measures in place to constrain both overall capitalization of this sector, and the potential for this sector to disadvantage other sectors. While the MLOA on the LLP license has served its purpose, it may no longer be necessary for this sector.

In addition to the specific MLOA constraints, the Council also included provisions about vessel length classes (greater than or equal to 60 feet [18.3 m] but less than 125 feet [38.1 m] LOA, greater than 125 feet (38.1 m)) in the LLP, affirming that no vessel could exceed the length constraint of their vessel class. One of the primary uses of these vessel length classes has been to designate differing requirements for observer coverage in each of these classes. As of January 1, 2013 the entire freezer longline sector is required to meet a single level of observer coverage, namely an observer onboard 100 percent of the time while fishing or processing groundfish. Therefore, the need to preserve vessel length classes (through the MLOA) for this sector may also no longer be necessary.

---

<sup>11</sup> Measured at the waterline

<sup>12</sup> The Council analysis noted that restricting vessel length is not necessarily a guaranteed way to restrict vessel capacity, but that it was the best regulatory proxy at the time.

## **AFA “large vessel” restriction**

The AFA restriction applies to all U.S. fisheries, and contains a clause that allows the Council to recommend that larger vessels be used in fisheries under its authority. Again, this restriction was instituted in response to national issues of overcapacity. In Alaska, the Council has already removed this restriction for trawl catcher/processors (both those participating in AFA pollock fisheries, and those participating in Amendment 80 fisheries). The Council has already adopted conservation and management measures relating to overcapacity for this sector, as described above. However, until the Council explicitly sanctions the use of new, large vessels in the fishery, vessel replacement is limited to the thresholds identified in the AFA. Under the status quo, there are 9 vessels currently in the fishery that exceed the identified length or tonnage thresholds. Six of these vessels were built between 1936 and 1945. Vessel owners are not allowed to replace these vessels with ones of comparable length and/or capacity, under Alternative 1. There are also six additional vessels in the fleet that are within 10 percent of the length and/or tonnage thresholds.

## **Production efficiency**

In general, the LLP and AFA restrictions constrain the economic feasibility of rebuilding or replacing vessels in the freezer longline fleet. One of the primary advantages of replacing a fishing vessel is to incorporate improved hold design, processing plant construction, engines, and other advancements in marine design that improve a vessel’s efficiency, capacity, and safety. The cost of the new vessel must, however, be affordable, ideally because of the increased production efficiency that will result from fishing with the new vessel. Many of the existing freezer longline catcher/processor vessels were not fishing vessels when initially constructed. Inherently, these vessels are less well designed for fishing than a newly constructed fishing vessel. Given the sector allocation of Pacific cod, and the sector’s voluntary fishing cooperative, there is little opportunity for a vessel to increase its overall catch of groundfish. There are, however, opportunities to make the current catch more valuable, for example by sending a higher quality fish to the plant, processing higher value products or more ancillary products, and processing incidental catch species that may currently be underutilized (such as skates). Two major limitations on processing other products are the capacity of the freezer and hold, and the size/layout of the factory to accommodate multiple processing lines. Both of these limitations are primarily addressed through increasing vessel size and tonnage. Additionally, a larger vessel may accommodate more fuel-efficient engines and reduce maintenance costs, which would provide additional cost savings.

Under the status quo, 21 of the 36 LLP licenses are fished on vessels with an LOA equivalent to the MLOA of the LLP license, and another 7 are within 6’ of the MLOA (Table 1). While vessel owners are able to rebuild or replace their vessels under the status quo, they are often not able to build a longer vessel, and may be additionally constrained by the AFA tonnage restrictions in order to receive a fishery endorsement for their vessel. These limitations are not constraining to every vessel owner, particularly those with an LLP license with an MLOA larger than its assigned vessel. There are two new freezer longline vessels that are currently being built for use in this fishery, under the status quo (see section 1.5.13). However, in general, these LLP and AFA limitations make it less economically viable to invest in rebuilding or replacing the vessel.

## **Safety**

By limiting the incentive of vessel owners to replace their vessels, there may also be adverse impacts on the safety of this fleet. The average age of vessels currently in this sector is 39 years. These are, on average, the oldest of any catcher/processors in the BSAI fisheries. A third of the vessels used in this fleet were built before 1946. The U.S. Coast Guard and freezer longline vessel owners have seen significant improvements in vessel safety as a result of the Alternate Compliance and Safety Agreement program

implemented in 2006 to 2009; however, there are limitations to the program's ability to be effective in the long-term. Some improvements in vessel safety simply cannot be retrofitted to older vessels. Only vessels that choose to produce fish products, found in Table 16, Column B, are required to participate in it. Opting out of the production of ancillary products could degrade the vessel's safety regime, without reducing the vessel's risk profile. The age of the fleet is such a safety concern that U.S. Coast Guard marine inspectors in charge of implementing the ACSA program continue to express serious concern over the material condition and long-term viability of this aging fleet.

## **Summary**

Under Alternative 1, the status quo alternative, no incentive to accelerate vessel replacement for the freezer longline fleet will be implemented. Vessel replacement is allowed under the status quo, and certain vessel owners have chosen, and will continue to choose, to build replacement vessels. Significant disincentives exist, however, especially for vessels less than 125 feet (38.1 m) LOA. In many cases, the cost of a new vessel may not be affordable, without the increased production efficiency that could result from constructing a larger vessel. Under this alternative, it is likely that the condition of this aging fleet will increasingly threaten the long term viability of the vessels and the safety of the crew at sea.

### **1.6.2 Alternatives 2 and 3: Changing constraints on vessel replacement**

Both Alternatives 2 and 3 change constraints of the MLOA, although to a different extent. The benefits of these alternatives, relative to the status quo, are that they provide flexibility for qualifying vessel owners to replace their vessels with larger vessels, in order to improve safety, processing operation, and engine efficiency. Under Alternative 2, these benefits are limited to holders of LLP licenses with an MLOA of less than 150 feet (45.7 m). Under Alternative 3, both MLOA and AFA restrictions are lifted for all LLP license holders in the sector. Some general impacts applicable to both alternatives are discussed below, followed by specific sections for each alternative.

#### **Production efficiency**

The recent developments of a limited class of participants, sector allocation, capacity reduction (in the form of the voluntary vessel buyback program described in more detail in Section 1.5.9 of this Analysis), and the negotiation of a voluntary cooperative structure for the BSAI freezer longline fleet, have changed the character of the BSAI Pacific cod hook-and-line catcher/processor fishery. Under a rationalized fishery, it can be argued that companies are better able to determine their production stream. With this insight, companies are better able to design vessels for their harvesting and processing strategies. Currently, freezer longline vessels are designed to maximize profits in an open access fishery. In an open access fishery, the primary emphasis in the processing line is to maximize throughput, which, for the freezer longline fleet, is to head and gut the fish. As a result, on many vessels, the processing of ancillary products, which is often more labor intensive and is time consuming, has been minimal, despite the value of these ancillary products. There is a limited degree to which these older vessels can be redesigned to take advantage of new technologies and processing opportunities.

A major economic advantage of replacing these vessels with larger vessels will likely be additional capacity to improve overall production efficiency of existing products, and add processing of ancillary product forms. Some processing of roe, milt, collar bones, stomachs, and to a limited extent, heads, has already been undertaken (Section 1.5.4). Additional opportunities may be available in processing liver, liver oil, and head meat products (cheeks, tongue); vessels could also install small fish meal plants to fully utilize the catch. Processing of skates, taken incidentally in the fishery, is also an economic opportunity. Markets already exist for many of these product forms. Some of these products are more valuable than others, and vessels with smaller holds also have to weigh the tradeoff between lower value products and

available hold space. Larger and purpose-built vessels (both in length and tonnage) are generally needed to fully take advantage of these product types. Limitations on processing these other products include the capacity of the freezer and hold, and the size/layout of the factory to accommodate multiple processing lines. Additional accommodation for processing labor may be required for these ancillary operations, as well as more power to run the larger capacity refrigeration and factory plants.

Other design elements can also be included in a new vessel, which improve the production efficiency of a fishing operation. Some examples from vessels being used in cod fishing operations in Norway include hybrid diesel electric engines, which increase fuel efficiency and available power, and more automation in factory lines. Longline vessels are also being designed with a moonpool, where the deck is enclosed, and catch is hauled up through a hole. This would have significant benefits for both crew safety and comfort, and potentially reduce fishing delays due to inclement weather. It has also been suggested that the quality of fish may be improved in a moonpool boat, as the fish are not gaffed (M. Burns, personal communication, May 7, 2012). Vessels with larger holds may also be able to remain longer on the fishing grounds, and fewer, longer trips may result in fuel savings.

Removing disincentives for some in the fleet to replace their vessels with larger ones may result in some consolidation. Vessel owners may choose to replace multiple vessels with a single, larger vessel that can more efficiently harvest the allocations assigned under cooperative management. This consolidation would not be expected to result in reduced harvests overall. It likely will, however, increase the effective fishing capacity within the sector, and could impact employment and labor costs.

A factor that may affect the incentive for owners of freezer longline vessels to rebuild their vessels in the near term is the current interest rate. Favorable interest rates could motivate owners that were on the fence about rebuilding their vessels. From the perspective of a credit risk, the freezer longline vessel fleet is considered favorable or, at worst, neutral,<sup>13</sup> due to the combined factors of cooperative formation within the fleet, and restricted entry and sector allocations for BSAI and GOA Pacific cod. From the perspective of the lender, the proposed action to remove constraints on building larger vessels is positive, since owners would also have the flexibility to design a platform that better meets their needs. Naturally, this credit environment would change if all owners decided to rebuild and increase the size of their vessels at the same time, which may lead to overcapacity, given fixed quotas for the Pacific cod fisheries.

### **Economic spillover or redistribution**

Although there may be some adverse effects from allowing larger replacement vessels, there are relatively few opportunities for LLP license holders with adjusted MLOAs to fish their larger replacement vessels in other fisheries, as most other available target fisheries for this fleet are already constrained by sector allocations or individual fishing quotas. A further discussion of these impacts is included below in the analysis of each alternative.

As discussed above, adjusting vessel length restrictions for replacement vessels could result in limited consolidation of the BSAI freezer longline fleet. Cooperative members perceiving a higher return from leasing their quota, versus remaining in the fishery with an older, less efficient vessel, will likely lease their quota to other cooperative members. While this is also a feature of the status quo, there may be an increased impetus towards consolidation if some cooperative members are looking to recoup capital outlay on a new vessel by increasing their harvesting capacity, and this interest affects lease rates. Consolidation could have an adverse impact on the availability of jobs for crew. If there are fewer vessels participating in the fishery, there may be fewer opportunities for crew.

---

<sup>13</sup> Personal communication with Michael Wittman, Northwest Farm Credit Services. May 11, 2012

To the extent that vessels with larger holds may extend their fishing trips and require fewer port calls, there may be some impact on port communities that supply these vessels. It is not anticipated that there would be a substantial change in fishing patterns as a result of these alternatives, however. The overall level of effort in the fishery will remain unchanged from status quo, as this action has no effect on Pacific cod TAC, or the sector's annual allocation. The Pacific cod TAC itself can change significantly from year to year, based on year class recruitment. The Pacific cod stock is currently at a high biomass level after several years of lower TACs. Figure 1 illustrates that Pacific cod are caught throughout the BSAI, extending both far north, along the Bering Sea slope, and far west in the Aleutian Islands.

Some of the vessels that are named on LLP licenses affected by Alternatives 2 and 3 are also active in the GOA hook-and-line Pacific cod fishery. The GOA fishery also has sector allocations, as of 2012. BSAI cooperative members have coordinated their fishing in the GOA Pacific cod fishery for several years, in order to allow the fishery to remain open, despite potentially constraining halibut PSC limits. There are three LLP licenses in the GOA Pacific cod hook-and-line catcher/processor subsector that are exclusively endorsed for cod fishing in the GOA. As noted in Section 1.5.7, the GOA-only LLP licenses have MLOAs of less than 124 feet (37.8 m) and the vessels currently named on the three LLP licenses are smaller than the MLOA. Two are endorsed for the Western GOA only, and one for the Central GOA only. With the advantage of cooperative fishing amongst the BSAI freezer longliners, combined with larger, purpose-built replacement vessels, the BSAI-endorsed LLP license holders could consolidate BSAI harvests within the cooperative, and use their increased processing capacity to garner a greater proportion of the GOA Pacific cod sector allocation, relative to their historical catch. In addition to increased capacity, the larger vessels are also less sensitive to weather conditions, which can limit opportunities for smaller vessels (such as the GOA-only endorsed vessels). This has the potential to negatively impact the three GOA-only freezer longline vessels. Note, however, that even under the status quo, the vessels that fish in the BSAI are all larger than those that are only GOA-endorsed, and some of them substantially so. The cooperative has the ability, under the status quo, to pre-empt fishing opportunities by the exclusively GOA-endorsed vessels, as the GOA Pacific cod catcher/processor subsector allocation is relatively small, compared to the number of vessels that are endorsed to participate in the sector (see Section 1.5.7). However, this condition may nonetheless be exacerbated with the replacement of these vessels with larger ones.

The cooperative is currently negotiating to establish a GOA cooperative, to include all the exclusively GOA-endorsed LLP licenses, which would presumably seek to mitigate any potential negative impact on GOA-only vessels. One of the three vessels is currently owned by one of the fishing companies that is already part of the FLCC; the other two GOA-only endorsed LLP license holders are reportedly interested in being part of such a cooperative; however, no agreement has been finalized.

## **Safety**

On average, the freezer longline fleet is the oldest catcher/processor fleet in the BSAI fisheries. Since newly built vessels, and vessels that undergo major modification, must meet the full suite of safety standards, as indicated in Table 18, replacement vessels will be inherently safer, as well as more efficient, than the vessels they are replacing. Under Alternatives 2 and 3, a disincentive to replacing vessels is removed for some or all vessel owners in the freezer longline fleet, which may result in safety improvements. Modernizing this fleet would address serious concerns that have been expressed by U.S. Coast Guard marine inspectors regarding the material condition and long-term viability of this fleet.

### **1.6.2.1 Alternative 2: MLOA adjustment for LLP licenses less than 150 feet (45.7 m)**

Alternative 2 adjusts LLP constraints to allow owners of freezer longline vessels less than 150 feet (45.7 m) to rebuild or replace their vessels with somewhat larger vessels. The alternative would increase the MLOA on a qualifying LLP license by 20 percent, not to exceed 150 feet (45.7 m) LOA. Under the alternative, a total of 17 LLP licenses would be eligible for larger MLOAs (Table 1). Of these 17 LLP licenses, 10 licenses would have their MLOA changed to 150 feet (45.7 m), while the other 7 licenses would have their MLOA changed to 149 feet (45.4 m).

#### **Production efficiency**

Some of the positive effects of improved efficiency from vessel replacement, as discussed in Section 1.6.2, would apply for eligible LLP license holders under this alternative. The extent of the benefit is mitigated, however, as the vessel length restrictions of 150 feet (45.7 m) also indirectly limit the level of production efficiency and additional processing that a replacement vessel can incorporate. In evaluating recent production in the fleet, the age of the vessel seems to be an important factor in terms of producing ancillary products (Table 6, Table 8, Table 9), where newer vessels are more likely to produce other product types. In a new, purpose-built replacement vessel, a 150-foot (45.7-m) LOA restriction will allow vessels to take advantage of more efficient designs, within the length limitation. It will depend on the economics of the individual operation, as to whether the improvements of a new vessel are sufficient to outweigh the cost.

#### **Economic spillover or redistribution**

Adjusting the MLOA for qualifying LLP licenses under Alternative 2 would not be likely to result in a significant increase in capacity in other groundfish fisheries. Some of the vessels that are named on the qualifying LLP licenses also directed fish for sablefish in the BSAI and the GOA, but these hook-and-line fisheries are already managed with an individual fishing quota program. None of the 17 qualifying LLP licenses under this alternative have BSAI or GOA pot Pacific cod endorsements, so there is not likely to be an impact in these fisheries. There are currently four eligible vessels that actively fish for Greenland turbot in the BSAI. The target fishery is currently limited access and is prosecuted by catcher/processors, primarily from the freezer longline or Amendment 80 sectors. There are currently no prohibitions on vessels participating in the fishery, so it is possible that increasing capacity under Alternative 2 may result in an increase in activity in the Greenland turbot fishery. The Council has initiated an analysis to look at allocating the Greenland turbot TAC between fixed gear and trawl gear.

As evaluated in the overview for Alternatives 2 and 3 (Section 1.6.2), adjusting constraints to allow larger replacement vessels for the BSAI freezer longline sector could leave the three freezer longline vessels that operate exclusively in the GOA at a disadvantage. As the BSAI vessels have formed a cooperative under the status quo, the cooperative currently has the ability to pre-empt fishing opportunities for these vessels. With larger, more efficient replacement vessels that are less sensitive to weather, this impact may be exacerbated. The cooperative is currently negotiating to develop a cooperative in the GOA to include the GOA-endorsed vessels, which would presumably mitigate potential negative impacts; however, the negotiations are not yet completed.

#### **Safety**

The average age of the freezer longline vessels less than 150 feet (45.7 m) is approximately 27 years. Since all replacement vessels will either be classed and load lined, or meet the requirements of ACSA, if this alternative promotes rebuilding any of the vessels within this class, it will result in improved safety.

In addition to safety improvements inherent in the construction of new vessels, for the eligible vessels under this alternative, there are also several statutory requirements that may translate into improved safety protections. Table 17 lists additional safety and crewing requirements, and their regulatory thresholds that are required for larger vessels and larger fish processing crews. Of the 17 vessels that would qualify for replacement under this alternative, no freezer longline vessel currently has 16 or more processor workers, and only four vessels exceed the tonnage threshold. If these vessels were replaced with larger vessels, additional safety and crewing requirements would be triggered. The cost of these additional requirements would have to be factored in to the calculation of whether the cost of a replacement vessel is warranted; however, any vessel that is eventually replaced would have to meet higher safety standards.

This alternative only authorizes increased replacement vessel length for vessels less than 150 feet (45.7 m). Vessel length restrictions often lead to inefficient hull designs and other compromises in vessel design. One drawback of vessel length restrictions is the potential for compromise in vessel safety. The average length of the three existing classed and load lined freezer longline vessels is approximately 165 feet (50.3 m). Arguably, vessels of this size provide a more stable work platform and are better able to withstand the harsh weather found when operating in the Bering Sea and Aleutian Islands. Allowing owners and naval architects maximum flexibility in vessel design, and vessel dimensions, within the well-established rules of classification and load line requirements, would enhance the safety of new fish processing vessels.

### **Summary**

In summary, Alternative 2, relative to status quo, provides an opportunity for holders of freezer longline LLP licenses to receive an adjustment to their MLOA, to either 149 feet (45.4 m) or 150 feet (45.7 m) LOA. This would give those LLP license holders the opportunity to replace existing vessels with somewhat larger ones. Having this ability may improve production efficiency, and allow for increased vessel safety. At the same time, the limitations on vessel replacement length for this alternative could limit the incentive for vessels to take advantage of vessel replacement, if improvements in production efficiency are insufficient to justify the cost of a new vessel.

#### **1.6.2.2 Alternative 3: Vessel Replacement with No Length Restriction**

Under Alternative 3, the MLOA of LLP licenses with Pacific cod hook-and-line catcher/processor endorsements would no longer restrict vessels that are named on these LLP licenses. This alternative would offer vessel owners the greatest flexibility to rebuild or replace their vessels and incorporate improvements in processing and safety. This alternative would also allow new or replacement vessels of greater than 165 feet (50.3 m) in registered length<sup>14</sup> or more than 750 gross registered tons, or with an engine or engines capable of producing more than 3,000 shaft horsepower. Currently, vessels meeting these thresholds may not receive a fishery endorsement to fish in any fishery in the EEZ under the Council's jurisdiction, unless the vessel carried a fishery endorsement prior to September 25, 1997, or the Council has recommended, and the Secretary of Commerce has approved, a conservation and management measure to allow the vessel to be used in fisheries under its authority.

Alternative 3 would remove all regulatory constraints on the size or capacity of rebuilt or replacement vessels for the qualifying LLP licenses, which would include all 36 LLP licenses within the BSAI freezer longline sector.

---

<sup>14</sup> Measured at the waterline

## **Production efficiency**

Under Alternative 3, all of the economic efficiencies discussed in Section 1.6.2 would potentially be extended to all LLP license holders. This alternative would provide the maximum flexibility to vessel owners in the freezer longline sector for replacing their vessels. Removing the constraints included in the LLP and the AFA is likely to make replacing vessels more economically attractive.

Although, in theory, there is no limit to the size of vessel that may be used in the fishery under this alternative, there appear to be some efficiency constraints for the freezer longline sector, which may limit the useful size of replacement vessels. A vessel can only haul in one longline at a time, which is an inherent constraint on the processing operation, as it determines the rate at which fish enter the processing plant. The added benefit of a larger freezer longline vessel is that it is able to provide more processing space, necessary for value-added processing, and increased freezer storage space. Given the overall constraint of the rate at which the fish enter the plant, Jonathan Parrott, of Jensen Maritime Consultants, Inc., suggests the maximum operational efficiency of a freezer longline vessel appears to be limited to vessels 180 feet (54.9 m) or less.

The Pacific cod sector allocation, and the sector's voluntary cooperative, would also limit the size of replacement vessels. These sector allocations likely have changed the focus of vessel replacement incentives, from being more competitive in a race for fish, to improving production efficiency and safety. Vessels are now more likely to replace current vessels with larger ones, in order to utilize their existing Pacific cod allocations and incidental catch more effectively by increasing product quality and processing ancillary products.

## **Economic spillover or redistribution**

There are relatively few opportunities for LLP license holders with unrestrictive MLOAs to fish their larger replacement vessels in other fisheries, as most other available target fisheries for this fleet are already constrained by sector allocations or individual fishing quotas. The sector targets Greenland turbot and sablefish in the BSAI, although effort by the sector in these fisheries is significantly lower than for Pacific cod. Sablefish are already managed under an individual fishing quota program, and any increase in capacity among qualified LLP license holders should, therefore, not disadvantage other participants in the sablefish target fishery. As discussed under Alternative 2, the Greenland turbot fishery is currently limited access, and there are currently no prohibitions about vessels participating in the fishery. The Council has initiated an analysis to look at allocating the Greenland turbot TAC between fixed gear and trawl gear.

As evaluated in the overview for Alternatives 2 and 3 (Section 1.6.2), adjusting constraints to allow larger replacement vessels for the BSAI freezer longline sector could leave the three freezer longline vessels that operate exclusively in the GOA at a disadvantage. As the BSAI vessels have formed a cooperative under the status quo, the cooperative currently has the ability to pre-empt fishing opportunities for these vessels. With larger, more efficient replacement vessels that are less sensitive to weather, this impact may be exacerbated. The cooperative is currently negotiating to develop a cooperative in the GOA to include the GOA-endorsed vessels, which would presumably seek to mitigate potential negative impacts.

There are three qualifying LLP licenses under Alternative 3 that also have a Pacific cod pot gear catcher/processor endorsement. The vessels are greater than 150 feet (45.7 m) LOA. In recent years, one of the vessels named on these LLP licenses has had fairly active participation in the Pacific cod pot fishery (Table 10, Section 1.5.6). Under the status quo, these vessels could lease their hook-and-line Pacific cod quota share within the voluntary cooperative, and fish full-time in the Pacific cod pot fishery, off the pot catcher/processor allocation. Allowing a replacement vessel of unlimited size, as with

Alternative 3, would have the potential to increase the disadvantage to other pot cod sector participants, as these vessels could increase their harvesting capacity at the expense of other participants.

Allowing replacement vessels of unrestricted length could affect cooperative negotiations. Currently, vessel owners rely heavily on historical catch in negotiating catch shares within the cooperative. Under Alternative 3, vessel owners might try to leverage their increased fishing and processing capacity (from a replacement vessel) for a larger share of the catch within the cooperative. With a greater fishing and processing capacity, vessel owners with larger replacement vessels have a greater incentive to negotiate a larger catch share or, failing negotiation to their desired catch share, they may have more incentive to break the voluntary cooperative, and utilize their greater fishing capacity to try to harvest more of the groundfish in the limited access fishery. The potential for this outcome is limited by cooperative agreements and provisions that discourage cooperative members from leaving the cooperative, and which currently require a supermajority vote by 85 percent of the LLP license holders in order to disband the cooperative.<sup>15</sup>

### **Safety**

The average age of the freezer longline fleet is 39 years. Under this alternative, a disincentive to vessel replacement is removed, and may result in more vessels finding it advantageous to replace their aging vessels with more efficient fishing vessels that also have improved safety features. Compared to Alternative 2, the restrictions are removed for all LLP licenses. In addition to the loss of life concerns, there are also financial incentives to improving the safety of vessels, for example to reduce insurance rates.

### **Management/Administrative**

This alternative will require some additional management time to develop and monitor a tracking system for the 36 qualifying LLP licenses. However, removing the restriction of the MLOA would also remove the need to enforce this restriction as well. Additionally, it has been suggested by NMFS that by not having a maximum vessel length associated with the licenses, there may be some unforeseeable future risk, if an LLP license holder decides to replace a vessel with one that is considerably larger than those currently used in fisheries, utilizing new developments in technology.

### **Summary**

In summary, Alternative 3, relative to the other alternatives, provides the most comprehensive opportunity for owners of freezer longline vessels to replace their vessels with larger vessels. The absence of vessel length restrictions allows vessel owners to design more efficient and safer replacement freezer longline vessels. While, by regulation, the vessel length would be unrestricted, there appear to be efficiency limitations that would likely limit vessel length in replacement vessels. There are relatively few opportunities for LLP license holders with unrestrictive MLOAs to fish their larger replacement vessels in other fisheries, as most other available target fisheries for this fleet are already constrained by sector allocations or individual fishing quotas.

#### **1.6.3 Options restricting use of replaced vessels (2.1, 2.2, 3.1, and 3.2)**

Alternatives 2 and 3 both have two options that impose restrictions on how vessels that are named on the qualifying LLP licenses may be used, once replaced. Option 2.1 is the most restrictive. If the vessel that is named on a qualifying LLP license is replaced, the replaced vessel may not be designated on any other

---

<sup>15</sup> Whether the provisions requiring a supermajority of LLP holders to disband the contract are enforceable is uncertain.

FFP or LLP license. That is, the replaced vessel may no longer be used for groundfish or crab fishing in the BSAI or GOA Federal fisheries. Option 3.1 is similar to Option 2.1, however it relaxes the restriction such that a vessel that is named on a qualifying LLP license may be used on another LLP license that has a catcher/processor and hook-and-line Pacific cod endorsement for the Bering Sea or Aleutian Islands. That is, the replaced vessel cannot be used for groundfish or crab fishing in the BSAI or GOA fisheries, except that it may be used to replace another vessel within the BSAI freezer longline Pacific cod sector. Options 2.2 and 3.2 are identical, and impose a narrow restriction: the vessel that is named on a qualifying LLP license may not be used to replace another vessel associated with a qualifying LLP license. That is, a replaced vessel could not be used to replace a different vessel within the BSAI freezer longline sector.

Under these options, the agency would need to implement a tracking system for the qualifying LLP licenses and associated vessels under either Alternative 2 or Alternative 3, implemented with one of these options. The vessel that is associated with the LLP license on the effective date of the amendment would be considered the original vessel, and if the LLP license is moved to a different vessel, it would be considered a replacement vessel. The Council may have originally intended that this provision only apply to vessels that are replaced with newly-built (or rebuilt) vessels. This distinction is not possible, however, because the action alternatives modify LLP licenses, and the options restrict vessel usage. In order for the options to work with the alternative, their proposed restriction needs to be interpreted relative to the LLP license.<sup>16</sup>

As a result, to implement these options, NMFS must track both the original vessel and any replacement vessels that are again replaced to ensure that they are no longer used as a BSAI groundfish hook-and-line catcher/processor (Options 2.2, 3.2), no longer designated on any groundfish or crab FFP or LLP license (Option 2.1), or are only designated on an LLP license that has a BSAI catcher/processor hook-and-line endorsement for Pacific cod (Option 3.1).

Under Alternative 2 or 3, absent any options restricting the use of replaced vessels, vessels that are replaced from this sector may be used anywhere there is a market or use for them. This is the same situation as under the status quo, where there are currently no restrictions on where a replaced vessel in this sector may be used. Under Alternative 2, there are 17 LLP license holders that qualify for an increased MLOA and, thus, might have further incentive to replace their vessel; under Alternative 3, all 36 LLP license holders qualify for an increased MLOA.

In order to assist the Council in evaluating the potential for increased capacity entering the groundfish or crab fisheries, as a result of potentially having large catcher/processors come available on the market, an assessment was made of available LLP licenses in the fisheries, and particularly those that are currently inactive. Note, however, that if the Council's intent is to limit additional capacity from entering the fisheries through inactive LLP licenses, a more targeted approach would be to extinguish inactive licenses. As it is, any of the available, inactive LLP licenses could be bought and brought into use at any time, either by acquiring a vessel from a different sector, or by building a new vessel.

The smallest vessel currently designated on the BSAI catcher/processor Pacific cod-endorsed LLP license is 110 feet (33.5 m) LOA. Consequently, the evaluation of available LLP licenses was limited to LLP licenses that have a minimum MLOA of 110 feet (33.5 m). There are a total of 308 BSAI and GOA groundfish LLP licenses that have an MLOA of 110 feet (33.5 m) or greater. Of these, 119 are catcher/processor licenses. We determined that a license was inactive if there was no landing of groundfish associated with the LLP license during the years 2010 to 2012. There are 73 inactive BSAI and GOA groundfish LLP licenses with an MLOA of at least 110 feet (33.5 m). Of these, 18 are

---

<sup>16</sup> Note, this interpretation was clarified with and agreed to by the Council at initial review in June 2012.

catcher/processor licenses. Of the total number, there are 52 inactive LLP licenses that are endorsed for non-trawl gear only, 13 that are endorsed for trawl gear only, and 8 that are endorsed for both gear types. Of the total number, there are 57 licenses that are only endorsed for fishing in one or more of the BSAI management areas, 7 that are endorsed for fishing in one or more of the GOA regulatory areas, and 9 that are endorsed for both. Of the LLP licenses that are endorsed for fishing in the GOA, 4 are catcher/processor licenses. An evaluation was also made of the crab LLP licenses. There are 226 crab LLP licenses that have a minimum MLOA of 110 feet (33.5 m); of these, 82 were not associated with a landing in 2010 or 2011. Note, however, that a vessel would need to obtain IFQ in order to fish for crab in the rationalized fisheries.

It is difficult to draw conclusions based on this evaluation, however, it does illustrate that there are inactive LLP licenses with larger MLOAs that are available in the BSAI and GOA groundfish fisheries, and which could be reactivated. In order for replaced vessels from the BSAI freezer longline sector to be used in other groundfish or crab fisheries, there would likely be a conversion cost involved to refit the vessel to another purpose. The current vessels are purposely designed for longline catcher processing. As discussed in Sections 1.5.6 and 1.5.7, there are few opportunities for increasing capacity within existing freezer longline fisheries in the BSAI and GOA fisheries. The vessels could be used in the catcher/processor pot fisheries for cod or sablefish (noting, however, that these fisheries have either a sector allocation or are managed under an IFQ program), or they could be refitted as catcher vessels for longline or pot. It may also be possible to refit the vessels as trawl vessels. Alternatively, the vessels could be used outside of the groundfish and crab fisheries, for example as processors in the Alaska salmon fisheries. The vessel could also be used in other fisheries outside of Alaska. It is likely that any of these conversions would involve a cost, which would affect the market price of the replaced vessel.

Under Options 2.1, 2.2, and 3.2, replaced vessels may not be used to replace other vessels in the BSAI freezer longline sector. As articulated in the Council's problem statement, the intent of this action is to facilitate vessel replacement, to improve both vessel safety and production efficiency of vessels in the BSAI freezer longline sector. It may be that the operations that choose to build new vessels are not those that are the least efficient or safe. In that case, allowing those replaced vessels to replace yet other vessels in the fishery would promote safety and efficiency across a broader range of the fleet. Under these three options, a major disadvantage, compared to the status quo, is that they prohibit vessel owners from using existing freezer longline vessels to replace other freezer longline vessels currently in use. Existing freezer longline vessels are fitted for the appropriate fisheries, and may be easier, and cheaper, to obtain than newly constructed vessels. Additionally, for companies owning multiple vessels, these three options would restrict their flexibility to move LLP licenses around on their vessels. Although such a restriction would not limit the ability of a company participating in the FLCC to stack LLP licenses on particular vessel, these options could limit the flexibility of multiple vessel owners in years that a cooperative is not formed.

At the same time, from a safety perspective, U.S. Coast Guard personnel have indicated a preference for retiring existing freezer longline vessels. Options 2.1, 2.2, and 3.2, which prohibit replaced vessels from remaining in the BSAI freezer longline sector, may serve to encourage more owners to build newer and safer vessels. Absent these options, it is conceivable that a vessel owner could replace a small vessel that is in good condition with a larger, more efficient vessel that is in poorer material condition, to the extent permitted by the available LLP licenses.

Option 3.1 allows vessels that are replaced to be designated on another LLP license that has catcher/processor and hook-and-line Pacific cod endorsements in the Bering Sea or Aleutian Islands, although the replaced vessels may not be used with any other groundfish or crab LLP license. Under this option, it is likely that the vessels that are most desirable, presumably because they allow for production

efficiencies and are perhaps safer vessels, will remain in the fishery, while those that are least desirable will be removed from the fishery.

Under all of the options, an impact would be to increase the net cost of replacing a vessel in the sector, by devaluing the vessel that is being replaced. Under Option 2.1, the vessel would not be eligible to be used to fish in groundfish or crab fisheries off Alaska. It is possible that in this scenario, some replaced vessels may be able to be converted to use as an Alaskan salmon processor, operating in State waters. The vessel could also be used elsewhere, in other U.S. or international fisheries. Under Option 3.1, the vessel would be eligible to be used with an LLP license endorsed for the BSAI Pacific cod freezer longline sector, but not with any other LLP license for groundfish or crab. This would allow owners of the existing vessels that are more desirable (presumably because they are larger, or more efficient) to recoup some of the cost of the replacement vessel, by selling the replaced vessel within the sector. For those vessel owners with the least desirable vessels (likely those less than 125 feet (38.1 m) LOA), the net effect of this alternative would be similar to Option 2.1, and their only options would be to try to find a use for the vessel outside of the groundfish or crab fisheries off Alaska.

Under Options 2.2 and 3.2, the vessel would only be restricted from replacing another BSAI hook-and-line catcher/processor. It is possible, under these options, that the vessel could be used as a catcher/processor in another Alaska groundfish or crab fishery, if it were refitted for pot or trawl gear. It may also be possible for the boat to be refitted as a catcher vessel in another groundfish or crab fishery off Alaska.

#### **1.6.4 Option 3.3 – redesignate all MLOAs at 220 feet (67 m)**

Option 3.3 (**part of the preferred alternative**) would re-designate the MLOA on the 36 qualifying LLP licenses to 220 feet (67 m) MLOA. The implementation of Alternative 3 without this option will require NMFS to develop a tracking system for the 36 qualifying LLP licenses, to exempt them from the constraints of the MLOA. If the Council adopts Alternative 3 and Option 3.3, any vessel associated with a qualifying LLP license may be up to 220 feet (67 m) LOA.

Given the discussion under Section 1.6.2.2, with respect to the efficiency constraints on vessel length, such a limit is unlikely to have any adverse impact on the fleet. At the time the Council selected a preliminary preferred alternative, the largest MLOA of an LLP license that is endorsed for hook-and-line catcher/processor Pacific cod was 220 feet (67 m). This LLP license has been approved by NMFS as a participant in the fishery capacity reduction (buyback) program. NMFS approved the buyback on September 24, 2012 (77 FR 58775). Thus, the largest MLOA in this sector is currently 198 feet (60.4 m).

It has been suggested by NMFS that it is prudent to have a maximum vessel length associated with a license, rather than allowing vessel length to be unrestricted. While at this time, it is not envisaged that there would be a practical benefit from building a considerably larger vessel, it may be advisable at some future time to have a limit on vessel size, given changes and developments in technology.

#### **1.6.5 Option 3.4– limitation for LLP licenses with Pacific cod pot catcher/processor endorsement**

Option 3.4 (**part of the preferred alternative**) would limit the proposed change in Alternative 3 with respect to qualifying LLP licenses that also have a Pacific cod pot gear catcher/processor endorsement. Under Alternative 3 with this option, these LLP license holders would be required to make a one-time election of whether to (1) increase the MLOA on their LLP license to 220 feet (67 m), but thereby

surrender their Pacific cod pot gear catcher/processor endorsements;<sup>17</sup> or (2) retain their original MLOA, which would allow them to continue fishing in both the Pacific cod longline and pot fisheries.

Three of the 36 qualifying LLP licenses under Alternative 3 also have Pacific cod pot gear catcher/processor endorsements. All three of the licenses are endorsed for pot gear in the Bering Sea and Aleutian Islands, and one is additionally endorsed for the Western GOA. The vessels that are associated with the three LLP licenses are all greater than 150 feet (45.7 m) LOA. In recent years, one of the vessels named on these LLP licenses has participated in the BSAI and GOA Pacific cod pot fisheries (Sections 1.5.6 and 1.5.7). While there have been other pot cod landings by BSAI freezer longline Pacific cod-endorsement catcher/processors in the BSAI, these have been in the parallel waters or State-waters Pacific cod fisheries. There is no size restriction on vessels choosing to fish with pot gear in the parallel waters fishery, and there is no requirement that a vessel must have the appropriate gear endorsement on their LLP license to fish in the Aleutian Islands parallel waters fishery (as exists in the GOA).

Under the status quo, these vessels could lease their hook-and-line Pacific cod interests within the voluntary cooperative, and fish full-time in the Pacific cod pot fishery, off the pot catcher/processor allocation. Allowing a replacement vessel of unlimited size, as with Alternative 3, has the potential to further disadvantage other pot cod sector participants. Adopting Option 3.4 would eliminate any additional disadvantage to other pot sector participants, by constraining vessels to their original MLOA, if they choose to retain their endorsement for the Pacific cod pot fisheries. Note, under the status quo or Option 3.4, any vessel could, however, continue to fish with pot gear in State-waters, in the Aleutian Islands parallel fishery, off the pot sector's allocation, as there is no requirement for a particular gear endorsement to fish with pot gear in that fishery. Additionally, it is possible that even under Option 3.4, if an LLP license holder chooses to surrender its pot cod endorsement in order to receive the larger MLOA, the owner may then purchase a second LLP license that is endorsed for Pacific cod pot gear, and use that with the larger vessel. This is, of course, contingent on such an LLP license being available, and having the requisite large MLOA. At present, the three LLP licenses that are endorsed for both longline and pot gear in the BSAI represent three of the five LLP licenses with large MLOAs which are endorsed for BSAI pot cod. For the Western GOA, the LLP license that is endorsed for BSAI longline and Western GOA pot Pacific cod is one of only two LLP licenses with large MLOAs for the Western GOA.

Under this option, LLP license holders would be required to make a one-time permanent election to increase their MLOA to 220 feet (67 m), but thereby extinguish their BSAI and GOA Pacific cod pot gear catcher/processor endorsements. LLP license holders would have a 36-month time limit from the date of implementation of this action, to make this decision or they would be permanently ineligible to increase their MLOA to 220 feet (67 m) and would retain their original MLOA and the eligibility to fish in both the Pacific cod pot fishery and longline fisheries. The time limit will allow NMFS to more accurately track endorsements over time, and ensure that the Council's intent with this option is accurately implemented. It will also provide a defined point in time after which membership in the Pacific cod pot sectors would be more clearly identified, facilitating coordination among sector participants.

### **1.6.6 Potential net benefits to the Nation**

Overall, this action is likely to have a modest positive effect on net benefits realized by the Nation. Alternatives 2 and 3 provide a clear regulatory framework for adjusting constraints that may affect vessel replacement opportunities, and are more likely to result in vessel replacement. To the extent that vessel

---

<sup>17</sup> Note, the Council rewrote this option at the June 2012 initial review. Initially, it was written such that it only applied to the BSAI pot Pacific cod fishery; the Council's revision has extended the restriction to any pot Pacific cod catcher/processor endorsement, in the BSAI or the GOA.

replacement allows harvesters additional time to focus on improving quality, retention, market development, and product forms, there may be some consumer benefits realized from the proposed action, although any consumer surplus accruing to non-U.S. consumers will not contribute to improvements in net National benefits. As reported elsewhere, a substantial portion of output from this fishery is exported for re-processing and consumption. Conceivably, the proposed alternatives may increase the production efficiency of a harvester by allowing the use of more efficient vessels. Alternative 3 would provide vessel owners with the greatest flexibility to realize these benefits, whereas Alternative 2 would limit vessel replacement to vessels less than 150 feet (45.7 m) LOA. In either instance, net National welfare improvements deriving from increases in vessel and crew safety would be expected.

## **2.0 CONSISTENCY WITH APPLICABLE LAW AND POLICY**

This section evaluates this action against the National Standards and Fishery Impact Statement requirements in the Magnuson-Stevens Act, the BSAI Groundfish FMP management policy, the requirements of the National Environmental Policy Act, and the Regulatory Flexibility Act.

### **2.1 National Standards**

Below are the ten National Standards as contained in the Magnuson-Stevens Act, and a brief discussion of the consistency of the proposed alternatives with each of those National Standards, as applicable.

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

None of the alternatives considered in this action would affect the sustainability or catch levels of groundfish in the BSAI or GOA, since the fishery will continue to be managed under the current harvest specifications process. While the alternatives would also generally not affect the ability to achieve the optimum yield from each groundfish fishery, to the extent that the proposed alternatives provide an opportunity for increased utilization of existing catch, they could improve optimum yield.

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

This analysis is based on the most current, comprehensive data available, recognizing that some information (such as operating costs) is unavailable.

#### **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.**

This action makes no change to how groundfish stocks are assessed or managed in the BSAI and GOA.

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

Nothing in the alternatives considers residency as a criterion for the Council's decision, therefore the proposed alternatives treat all vessel owners the same regardless of residency. The proposed alternatives would be implemented without discrimination among participants. To the extent that increased utilization of target and incidental catch promotes conservation, this action may be considered as promoting

conservation of the groundfish resources in the BSAI and GOA; certainly, the action is not likely to negatively impact conservation. No fishing privileges are allocated under this action, and this action will not result in excessive shares.

**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.**

This action will increase inducements for vessel owners to replace vessels. To the extent that the vessel owners exercise the vessel replacement opportunity provided in this proposed action, this could allow more complete use of the fishery resources and improve efficiency in utilization of the longline Pacific cod resource in the BSAI and GOA.

**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 groundfish resources in the BSAI and GOA in future years. All harvest will continue to be managed under and limited by the TACs for each species.

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

This action imposes no additional costs on industry, and minimal costs on management for compliance, and does not duplicate any other management action.

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

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 vessels with a high degree of economic dependence upon the freezer longline groundfish fisheries. As discussed in Section 1.6.2, this fleet does not have a large impact on coastal communities, and while vessels with larger holds may be able to reduce port calls during fishing trips, this level of impact is unlikely to result in substantive adverse economic impacts.

**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.**

This proposed action could help to minimize bycatch by removing disincentives for owners of freezer longline vessels to replace their aging vessels. Replacement vessels with newer, more sophisticated technology could provide more opportunities for vessels to fully utilize target and incidental catch species, for example skates, and therefore minimize bycatch (discards).

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

The alternatives proposed should promote safety at sea because they remove disincentives for vessel owners to replace existing vessels with newer vessels that can accommodate improved safety and minimize the risks faced by vessels or crew.

## **2.2 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, (1) participants in the fisheries and fishing communities affected by the plan amendment; (2) participants in the fisheries conducted in adjacent areas under the authority of another Council; and (3) 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 prepared for this plan amendment constitutes the fishery impact statement. The likely effects of the proposed action are analyzed and described throughout the RIR. The effects on participants in the fisheries and fishing communities, and safety of human life at sea, are analyzed in Section 1.6.2.

The proposed action affects the BSAI 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 the GOA, under the Council's jurisdiction, are addressed in the analysis. Impacts on participants in fisheries conducted in adjacent areas, under the jurisdiction of other regional fishery management councils, are not anticipated as a result of this action.

## **2.3 BSAI Groundfish FMP Management Policy**

The alternatives discussed in this action accord with the management policy of the BSAI FMP. The Council's management policy (NPFMC 2011) includes the following objectives:

- Promote increased safety at sea.
- Continue program to reduce discards by developing management measures that encourage the use of gear and fishing techniques that reduce bycatch which includes economic discards.
- Reduce waste to biologically and socially acceptable levels.
- Develop management measures that, when practicable, consider the efficient use of fishery resources taking into account the interest of harvesters, processors, and communities.

By proposing to change criteria to allow owners of BSAI freezer longline vessels that fish for Pacific cod to replace or rebuild their vessels with larger vessels, the Council is consistent with its management policy.

## **2.4 Regulatory Flexibility Act**

The Regulatory Flexibility Act (RFA), first enacted in 1980, and codified at 5 U.S.C. 600–611, 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 such impacts, while still achieving the stated objective of the action. When an agency publishes a proposed rule, it must either, (1) “certify” that the action will not have a significant adverse economic effect on a substantial number of small entities, and support such a certification declaration with a “factual basis,” demonstrating this outcome, or (2) if such a certification cannot be supported by a factual basis, prepare and make available for public review an Initial Regulatory Flexibility Analysis (IRFA) that describes the potential adverse economic impacts of the proposed rule on directly regulated small entities, and the steps the agency has taken to minimize those impacts.

Based upon a preliminary evaluation of the proposed alternatives, it appears that certification is appropriate; therefore, NMFS has not prepared an IRFA. NMFS estimates that all of the directly regulated entities are large entities. While some of the directly regulated entities may be described as small with respect to their own gross revenues, when affiliations among entities are considered, as required under the RFA, **there are no small entities in this fishery.** The directly regulated vessels in this fleet have formed a fishery cooperative that effectively allocates to each vessel a share of the Pacific cod total allowable catch, and of the available halibut prohibited species catch allowance. These vessel-specific individual quotas are enforced under a private contract among the entities (NPFMC 2012). NMFS has reviewed the 2012 gross fishing revenues from all sources for the vessels affiliated through this cooperative, and finds that they substantially exceed the \$19 million threshold for determining whether a finfish fishing entity is large or small, for RFA purposes, that became effective on July 22, 2013 (78 *FR* 37898). Therefore, for the purpose of this analysis, the directly regulated entities are all contractually and operationally affiliated, making them large entities under RFA criteria. Thus, there are no directly regulated small entities under this action. This conclusion is consistent with previous actions directly regulating the same fleet, composed of the same operations, prosecuting the same resources (77 *FR* 35925, June 15, 2012; 77 *FR* 44575, July 30, 2012). The certification memo is attached to this analysis as an appendix.

#### **2.4.1 Recordkeeping and Reporting 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, recordkeeping, or other compliance requirements that differ from the status quo.

### 3.0 REFERENCES

- Jin, D, H Kite-Powell, W Talley. 2001. The safety of commercial fishing: Determinants of vessel total losses and injuries. *Journal of Safety Research* 32, pp 209-228.
- Meek, M, WR Brown, KG Fulford. A shipbuilders' view of safety. 1985. *Maritime Policy Management*, Volume 12, Number 4, pp 251-262.
- NMFS. 2011b. Secretarial Review Draft. Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for Proposed Amendment 83 to the Fishery Management Plan for Groundfish in the Gulf of Alaska. Allocation of Pacific Cod Among Sectors in the Western and Central GOA. Council. Anchorage, Alaska. May 6. Accessed at <http://www.alaskafisheries.noaa.gov/sustainablefisheries/amds/83/earirirfa0511.pdf> on August 5, 2011.
- [NPFMC] North Pacific Fishery Management Council. 2011. North Pacific Fishery Management Council. 2011. Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Management Area. NPFMC, Anchorage, Alaska. November 2011.
- NPFMC. 2007. Final Environmental Assessment/Regulatory Impact Review/Final Regulatory Flexibility Analysis Of the Final Rule Implementing Amendment 85 to the Fishery Management Plan for Groundfish of the Bering Sea/Aleutian Islands Management Area Allocation of Pacific Cod Among Harvesting Sectors. Council. Anchorage, Alaska. August 1. Accessed at <http://www.alaskafisheries.noaa.gov/analyses/amd85/bsa85final.pdf> on May 30, 2011.
- NPFMC. 1994. Environmental Assessment/Regulatory Impact Review/Initial Regulatory Flexibility Analysis for the Proposed Moratorium on the Entry of New Vessels into the Groundfish, Crab, and Halibut Fisheries for Amendment 28 to the FMP for the Groundfish Fishery of the Gulf of Alaska, Amendment 23 to the FMP for the Groundfish Fishery of the Bering Sea and Aleutian Islands, Amendment 4 to the FMP for the Commercial King and Tanner Crab Fisheries in the Bering Sea and Aleutian Islands Area, and Regulatory Amendment to the Pacific Halibut Regulations. Prepared by staff of the North Pacific Fishery Management Council, Anchorage, Alaska, April 28, 1994.
- Northern Economics, Inc. 2001. Interim Update of Processing Sector Profiles in the Groundfish Fisheries. Northern Economics. Anchorage, Alaska. July. Accessed at [http://www.alaskafisheries.noaa.gov/npfmc/misc\\_pub/NorthernEconomics/Processing%20Sector%20Profiles.pdf](http://www.alaskafisheries.noaa.gov/npfmc/misc_pub/NorthernEconomics/Processing%20Sector%20Profiles.pdf) on August 4, 2011.
- Talley, WK, D Jin, H Kite-Powell. 2005. Determinates of Crew Injuries in Vessel Accidents. *Maritime Policy Management*, July-September, Volume 32, Number 3, pp 263-278.

## **4.0 LIST OF PREPARERS AND PERSONS CONSULTED**

### **Prepared by**

Diana Evans, North Pacific Fishery Management Council  
Jon McCracken, North Pacific Fishery Management Council  
Michael Fey, Alaska Fisheries Information Network  
Dr. Mark Fina, North Pacific Fishery Management Council  
Seanbob Kelly NMFS  
CDR Chris Woodley, U.S. Coast Guard  
LT CDR Jennifer Lincoln, National Institute of Occupational Safety and Health  
Dr. Lew Queirolo, NMFS

### **Persons Consulted**

Mike Burns, Blue North Fisheries  
Joe Childers, representing F/V *Alpine Cove*  
Kenny Down, Freezer Longline Conservation Cooperative  
Jonathan Parrott, Jensen Maritime Consultants, Inc.  
Julie Miller, F/V *Kema-Sue*  
John Winther, Alaska Longline Company  
Michael Wittman, Northwest Farm Credit Services

G:\FMGROUP\Amendment 99 (BSAI) FLCC MLOA\PR\_NOA\A99 RIR MLOA 9\_17\_2013.rir.docx

R:\region\archives\2013\sep\A99 RIR MLOA 9\_17\_2013.rir.docx