

INITIAL REVIEW DRAFT
Environmental Assessment/Regulatory Impact Review
for
IFQ Omnibus Amendments
September 2021

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Abstract: This Environmental Assessment/Regulatory Impact Review analyzes several proposed management measures that would apply to fishery participants in the halibut and sablefish individual fishing quota (IFQ) fisheries off Alaska. First, the proposed management measures include changes to requirements specific to the pot fisheries, such as the biodegradable panel, pot gear configuration, gear retrieval, and pot limits, for the purpose of increasing operational efficiency for vessels in the BSAI and GOA and to reduce administrative burden. Another element of the action alternative would authorize jig gear as a legal gear type for harvesting sablefish IFQ, to increase access to entry-level fishing opportunities. Finally, the last proposed management measure would temporarily remove the Adak community quota entity (CQE) residency requirement for five years to provide more opportunity for the Adak CQE to fully harvest its allocation.

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List of Acronyms and Abbreviations

Acronym or Abbreviation	Meaning
AAC	Alaska Administrative Code
ABC	acceptable biological catch
ADF&G	Alaska Department of Fish and Game
AFA	American Fisheries Act
AFSC	Alaska Fisheries Science Center
AKFIN	Alaska Fisheries Information Network
BSAI	Bering Sea and Aleutian Islands
CAS	Catch Accounting System
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
COAR	Commercial Operators Annual Report
Council	North Pacific Fishery Management Council
CP	catcher/processor
CV	catcher vessel
DPS	distinct population segment
E.O.	Executive Order
EA	Environmental Assessment
EEZ	Exclusive Economic Zone
EFH	essential fish habitat
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	endangered species unit
FMA	Fisheries Monitoring and Analysis
FMP	fishery management plan
FONSI	Finding of No Significant Impact
FR	<i>Federal Register</i>
FRFA	Final Regulatory Flexibility Analysis
ft	foot or feet
GOA	Gulf of Alaska
IRFA	Initial Regulatory Flexibility Analysis
IFQ	Individual fishing quota
JAM	jeopardy or adverse modification
lb(s)	pound(s)
LEI	long-term effect index
LLP	license limitation program
LOA	length overall
LOF	List of fisheries
m	meter or meters
Magnuson-Stevens Act	Magnuson-Stevens Fishery Conservation and Management Act
MMPA	Marine Mammal Protection Act

Acronym or Abbreviation	Meaning
MSST	minimum stock size threshold
NAICS	North American Industry Classification System
NAO	NOAA Administrative Order
NEPA	National Environmental Policy Act
NMFS	National Marine Fishery Service
NOAA	National Oceanic and Atmospheric Administration
NPFMC	North Pacific Fishery Management Council
NPPSD	North Pacific Pelagic Seabird Database
Observer Program	North Pacific Groundfish and Halibut Observer Program
OMB	Office of Management and Budget
PBR	potential biological removal
PSC	prohibited species catch
PPA	Preliminary preferred alternative
PRA	Paperwork Reduction Act
PSEIS	Programmatic Supplemental Environmental Impact Statement
QS	Quota share
RFA	Regulatory Flexibility Act
RAM	Restricted Access Management
RFFA	reasonably foreseeable future action
RIR	Regulatory Impact Review
RPA	reasonable and prudent alternative
SAFE	Stock Assessment and Fishery Evaluation
SAR	stock assessment report
SBA	Small Business Act
Secretary	Secretary of Commerce
SPLASH	Structure of Populations, Levels of Abundance, and Status of Humpbacks
SRKW	Southern Resident killer whales
t	tonne, or metric ton
TAC	total allowable catch
TCEY	total constant exploitation yield
U.S.	United States
USCG	United States Coast Guard
USFWS	United States Fish and Wildlife Service
VMS	vessel monitoring system

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Executive Summary

This Environmental Assessment/Regulatory Impact Review analyzes several proposed management measures that would apply to fishery participants in the halibut and sablefish individual fishing quota (IFQ) fisheries off Alaska. First, the proposed management measures include changes to requirements specific to the pot fisheries, such as the biodegradable panel, pot gear configuration, gear retrieval, and pot limits, for the purpose of increasing operational efficiency for vessels in the Bering Sea and Aleutian Islands (BSAI) and the Gulf of Alaska (GOA) and to reduce administrative burden. Another element of the action alternative would authorize jig gear as a legal gear type for harvesting sablefish IFQ, to increase access to entry-level fishing opportunities. Finally, the last proposed management measure would temporarily remove the Adak community quota entity (CQE) residency requirement for five years to provide more opportunity for the Adak CQE to fully harvest its allocation.

Purpose and Need

In 2017, longline pots became a legal gear type for fishing sablefish in the GOA, and also allowed halibut retention in longline pots. In 2020, the retention of halibut in pots also became authorized in the BSAI (pot fishing for sablefish had previously been allowed in the BSAI). These actions afforded IFQ fishery participants the flexibility to use pot gear to fish for both IFQ halibut and sablefish; an important transition for many vessels and quota share (QS) holders to avoid whale depredation on hook and line (HAL) gear. Due to this regulatory flexibility, many vessels in the GOA and BSAI have reconfigured their vessels or operations to use pot gear either instead of, or in addition to HAL gear. Other vessels continue to fish with HAL gear, either because the benefits of using HAL continue to outweigh the costs of switching gear (some areas do not experience high levels of whale depredation and therefore IFQ fisherman can use HAL gear effectively), or they may intend to switch gear types in the future but have not yet done so.

The analyses for the management changes referenced above evaluated the potential socioeconomic and environmental impacts of a redistribution of effort from vessels using HAL gear to those using pot gear in the IFQ fisheries. Since then, fishery participants have experimented with a variety of gear configurations and designs and increased their knowledge of how to improve harvesting efficiency for their operations. Testimony provided at IFQ Committee, Advisory Panel, and Council meetings has identified the need for management measure adjustments for the halibut and sablefish fisheries.

In April 2021, the Council adopted the following purpose and need statement to initiate this action.

IFQ stakeholders, the IFQ Committee, and NMFS have identified regulatory revisions that could increase operational efficiency, reduce administrative burden, and clarify how harvesters can meet existing regulatory requirements. In addition, the Council is considering revisions to pot limits and gear tending restrictions also identified through the recent 3-year GOA sablefish pot review to determine whether they are serving their intended purpose.

The Community Quota Entity (CQE) program was modified in 2014 to include the Aleutian Islands. This allowed the community of Adak to form a CQE and purchase halibut and sablefish quota. Since the implementation of the Aleutian Islands CQE in 2014, Adak has faced challenges being able to harvest its IFQ. The Council is considering temporarily broadening who is eligible to harvest IFQ held by the Adak CQE to provide more opportunities for more fully harvesting its allocation.

Alternatives

Alternative 1: No action

Alternative 2: Revise IFQ program regulations to address the following regulatory clarifications

Element 1: Clarify that “slinky pots” are a legal gear for the IFQ fishery, and revise regulations to allow the use of biodegradable twine in the door latch or pot tunnel.

Element 2: Remove buoy configuration and flagpole requirements in regulation but retain “LP” marking requirement.

Element 3: Authorize jig gear as a legal gear type for the harvest of sablefish IFQ.

Element 4: Revise the pot gear configuration requirements to remove the 9-inch maximum width of tunnel opening so it does not apply when vessel has unfished halibut IFQ onboard.

Element 5: Pot Limits

- Option 1: Change the Pot Limit for Western Yakutat and/or Southeast Outside to
 - Suboption a) 180 pots per vessel
 - Suboption b) 300 pots per vessel

Element 6: Gear Retrieval requirements

- Option 1: Remove the gear retrieval requirement
- Option 2: Modify the gear retrieval requirement to 7 days for all GOA areas
 - Suboption: 3 days in SEO

Alternative 3: Remove Adak CQE residency requirement for a period of five years.

Note: Alternatives 2 and 3 are not mutually exclusive.

Comparison of Alternatives and Impacts

The alternative and elements included in this action, while all specific to the IFQ Program, can be logically grouped based on the participants likely to be involved and associated impacts. In analyzing the impacts of the Alternatives, it is helpful to think of the alternatives and elements in the following way:

Alternative 1- status quo, would maintain current gear requirements for participants who use pots to fish IFQ. This alternative would provide the least amount of flexibility in terms of specific gear configurations, pot limits, and gear retrieval requirements, which may hinder the ability of harvesters to efficiently harvest IFQ. Alternative 1 would also retain the status quo that the jig gear is unauthorized for the harvest of sablefish IFQ, which hampers the ability of some IFQ holders to fish IFQ in a way most effective for their operation. Lastly, Alternative 1 would maintain the Adak CQE residency requirement and would require that an individual must have maintained domicile in Adak for 12 consecutive months to be an eligible community resident and receive QS from a CQE.

Alternative 2 -Use of Pot Gear in IFQ Fishery (Elements 1, 2, 4, 5, 6)

These elements are all applicable to fishery participants using pots to harvest their IFQ. Element 1 would apply to the GOA and BSAI, while Elements 2, 4, 5, and 6 would be specific to the GOA. All of these elements would provide increased operational flexibility for harvesters using pot gear. It is expected that Elements 5 and 6 could increase the potential for gear conflicts between the pot and HAL fleet, however there are no data with which to quantify this potential or verify the magnitude of this impact. Environmental impacts of these elements mainly relate to potential changes to catch composition but are difficult to quantify based on limited data. The analysis highlights some of the data collection and

reporting difficulties regarding the use of pot gear in the IFQ fisheries, and potential avenues for navigating these challenges.

Alternative 2- Authorize jig gear for sablefish IFQ (Element 3)

Alternative 2, Element 3 would authorize jig gear as a legal gear type for the harvest of sablefish IFQ in the BSAI and GOA. Similar to the other elements under Alternative 2, this element would offer increased flexibility for sablefish QS holders to harvest IFQ in the way that is most effective for their operation. It is likely impacts of this Element would be limited to a small group of IFQ holders.

For the purposes of decision-making, it is also important to consider how elements under Alternative 2 could collectively impact fishery participants and the environment. Section 4.7.6 highlights some specific scenarios that could occur if certain elements are selected together or separately, and the potential impacts that could result from these interactions.

Alternative 3- Adak CQE Residency Requirement

Alternative 3 would allow ACDC, the non-profit who has purchased and holds halibut and sablefish IFQ for use by residents of Adak, to lease QS to non-residents on an annual basis for five years, in an effort to increase utilization of CQE-held quota and stimulate a stable fishing economy in the community.

1. Introduction

This Environmental Assessment/Regulatory Impact Review analyzes several proposed management measures that would apply to fishery participants in the halibut and sablefish individual fishing quota (IFQ) fisheries off Alaska. First, the proposed management measures include changes to requirements specific to the pot fisheries, such as the biodegradable panel, pot gear configuration, gear retrieval, and pot limits, for the purpose of increasing operational efficiency for vessels in the BSAI and GOA and to reduce administrative burden. Another element of the action alternative would authorize jig gear as a legal gear type for harvesting sablefish IFQ, to increase access to entry-level fishing opportunities. The last proposed management measure would temporarily remove the Adak community quota entity (CQE) residency requirement for five years to provide more opportunity for the Adak CQE to fully harvest its allocation.

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

This EA is being prepared using the 2020 CEQ NEPA Regulations. The effective date of the 2020 CEQ NEPA Regulations was September 14, 2020, and reviews begun after this date are required to apply the 2020 regulations unless there is a clear and fundamental conflict with an applicable statute. 85 Fed. Reg. at 43372-73 (§§ 1506.13, 1507.3(a)). This EA began on April 14, 2021 and accordingly proceeds under the 2020 regulations.

1.1. Purpose and Need

In April 2021, the Council adopted the following purpose and need statement to originate this action.

IFQ stakeholders, the IFQ Committee, and NMFS have identified regulatory revisions that could increase operational efficiency, reduce administrative burden, and clarify how harvesters can meet existing regulatory requirements. In addition, the Council is considering revisions to pot limits and gear tending restrictions also identified through the recent 3-year GOA sablefish pot review to determine whether they are serving their intended purpose.

The Community Quota Entity (CQE) program was modified in 2014 to include the Aleutian Islands. This allowed the community of Adak to form a CQE and purchase halibut and sablefish quota. Since the implementation of the Aleutian Islands CQE in 2014, Adak has faced challenges being able to harvest its IFQ. The Council is considering temporarily broadening who is eligible to harvest IFQ held by the Adak CQE to provide more opportunities for more fully harvesting its allocation.

1.2. History of this Action

History Relating to IFQ Program Regulations (under Alternative 2)

In April 2015, In 2017, longline pots became a legal gear type for sablefish in the GOA in response to increased whale depredation in the HAL fishery under Amendment 101 ([81 FR 95435](#), December 28, 2016; NPFMC 2016). The Council's motion included pot limits, gear retrieval requirements, gear

specifications, and a provision to allow the retention of incidentally caught halibut.^{1,2} Similarly, in 2020 pots became a legal gear type for halibut in the BSAI under Amendment 118 (NPFMC 2019) to allow for more efficient harvest of the halibut resource by decreasing the wastage of legal-size halibut discarded in the BSAI sablefish pot fishery, and to allow for the possibility of reducing whale depredation of halibut on HAL gear ([85 FR 840, January 8, 2020](#)) .

The GOA sablefish pot review (NPFMC 2021) (delayed by a year due to the Covid-19 pandemic) summarized 3-4 years of fishery data, as well as information gathered from speaking with fishery participants, managers, and stock assessment scientists. The review and subsequent testimony highlighted aspects of the fishery management that could be improved. Several testifiers and IFQ Committee members (at the March 2021 IFQ meeting and the April Council meeting) noted that some concerns held during the development of Amendment 101 were not realized to the extent they had anticipated. This was mainly regarding smaller HAL vessels being excluded from the fishery due to the deck space, stability, and power needed to convert a vessel to pots, and the magnitude of grounds preemption issues between pot and small HAL vessels. Some of these concerns were alleviated after more experience with a dual-gear fishery, and due to the development of lightweight, collapsible, tunnel-shaped “slinky” pots. The development of slinky pots added to the significant increase in the use of pot gear over the last few years of the fishery, as they could be used on smaller vessels that otherwise would have been unable to use larger, heavier, conventional pots. Additional information on slinky pots is included in Section 4.5.2.

During the review, some participants noted their desire for changes to loosen regulations, such as pot limits, be made incrementally, and for the Council to proceed with caution to continue mitigating the likelihood of gear conflicts and grounds preemption issues. In response, the Council initiated this analysis to revise several regulatory components of the IFQ Program.

History Relating to Adak CQE Residency Requirement (Alternative 3)

In 2014, NMFS published regulations to implement Amendment 102 to the BSAI Groundfish FMP ([79 FR 8870, February 14, 2014](#)). This amendment and accompanying regulations allowed an eligible community in the Aleutian Islands to establish a non-profit organization as a CQE to purchase halibut catcher vessel QS assigned to Area 4B and sablefish QS assigned to the Aleutian Islands. This was in direct response to a proposal from the Adak Community Development Corporation (ACDC) to modifying the existing CQE Program to use revenues generated from its holdings of Western Aleutian Islands golden king crab to purchase Area 4B halibut and Aleutian Islands sablefish QS for use by fishery participants delivering to Adak, AK. ACDC has since become the community quota entity for Adak.

A general requirement for the GOA CQE Program is that CQE-held QS can only be leased to individuals who have been residents of the community for the previous 12 months. In support of Adak’s efforts to use CQE opportunities to attract individuals to establish residency in the community, however, the amendment included an exemption for the community of Adak from the residency requirement for the first five years after the Adak CQE was established. As of March 17, 2019, this requirement expired. Therefore, this exemption was offered through the 2014-2018 IFQ fishing seasons.

¹ <https://npfmc.legistar.com/View.ashx?M=F&ID=3702492&GUID=2A0DE356-9E58-4E4C-A066-30DF11E98296>

² In November 2015, the Council wrote a letter to the International Pacific Halibut Commission (IPHC) requesting an amendment to make pot gear legal gear for halibut in IPHC areas overlapping the GOA.2 The Council did not define “incidental,” but in its letter assured the IPHC that it would monitor the amount and size of halibut caught in GOA sablefish pots so that it would be equipped with the information necessary to limit retention should it become an issue for the IPHC in the future. The IPHC responded favorably to the Council’s request and, at its January 2016 Annual Meeting, took action to make pot longline gear legal for halibut retention in all areas off Alaska provided such retention was authorized by NMFS.

While ACDC has prioritized the leasing of community held quota to residents through their quota distribution criteria, Adak has continued to experience a decline in population, and the closure of the processing plant in Adak has further hampered the community’s ability to develop a healthy fishing economy and retain eligible community residents (Section 4.5.4). According to CQE annual reports, a large amount of the CQE QS held by ACDC went unleased and/or unharvested in 2019 and 2020 (ACDC 2019; ACDC 2020).

In early 2021, the Council and IFQ Committee received public testimony from the ACDC pertaining to the difficulty the CQE has experienced in recent years when trying to lease CQE IFQ to eligible individuals and place non-vessel owners as crew on Adak-owned vessels, and requesting an emergency regulation to suspend the residency requirement applicable to the Adak CQE Program for 2021 to mitigate the impacts of the COVID-19 pandemic on the community. Despite the Council’s support, NOAA Fisheries denied this request, since it did not meet a criterion for emergency regulations that it be an unanticipated event that requires immediate attention.

At the April 2021 Council meeting, the IFQ Committee and subsequently the Council recommended this analysis to lift the Adak CQE residency requirement for a temporary period to provide additional flexibility for Adak to establish a rebuilding period to get back to a fully resident-harvest fishery.

1.3. Description of Management Area

Figure 1-1 shows an overlay of the NMFS groundfish management areas that are referred to in Federal regulations and the Council’s Fishery Management Plans (FMPs), and the eight IPHC regulatory areas (2C-4E) for waters off Alaska.

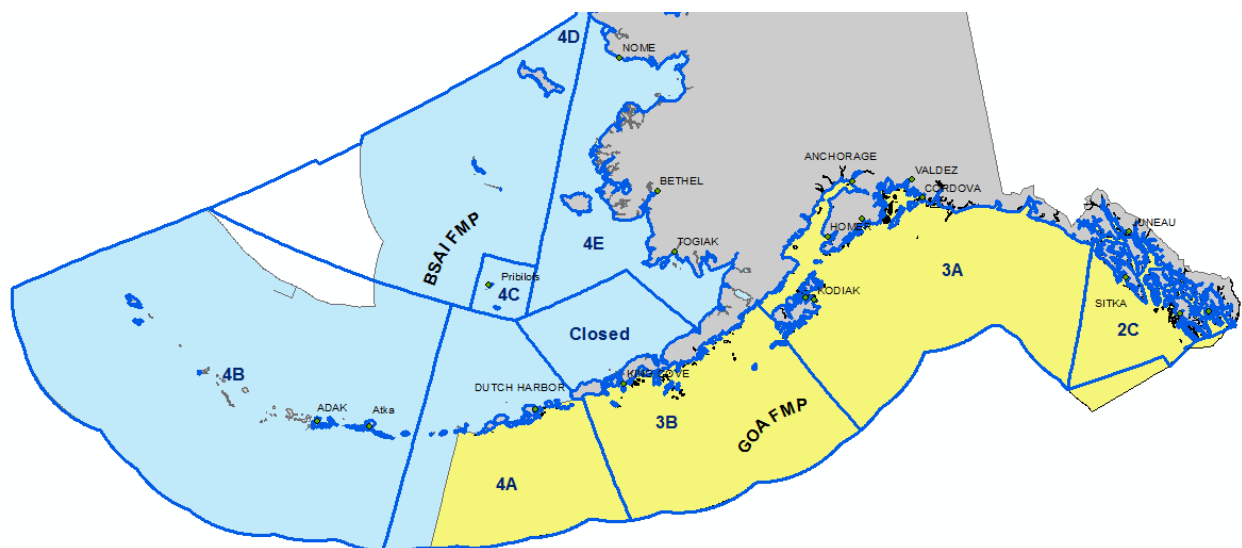


Figure 1-1 Overlay of Federal groundfish Fishery Management Plan (FMP) areas with IPHC regulatory areas.

Note: The BSAI FMP management area is blue and the GOA FMP management area is yellow.

The GOA includes all waters in the exclusive economic zone (EEZ) along the southeastern, southcentral and southwestern coasts of Alaska from Dixon Entrance to Unimak Pass. The GOA Fishery Management Unit is subdivided for management purposes into three regions; the Western GOA (WGOA/WG), Central GOA (CGOA/CG) and Eastern GOA (EGOA). For the purposes of this analysis, some of the tables will refer to the WGOA (610), CGOA (620 and 630), Western Yakutat (WY) District (640), and the Southeast

(SE) District (650), shown in Figure 1-2. The BSAI is split into the Bering Sea (BS) and Aleutian Islands (AI).

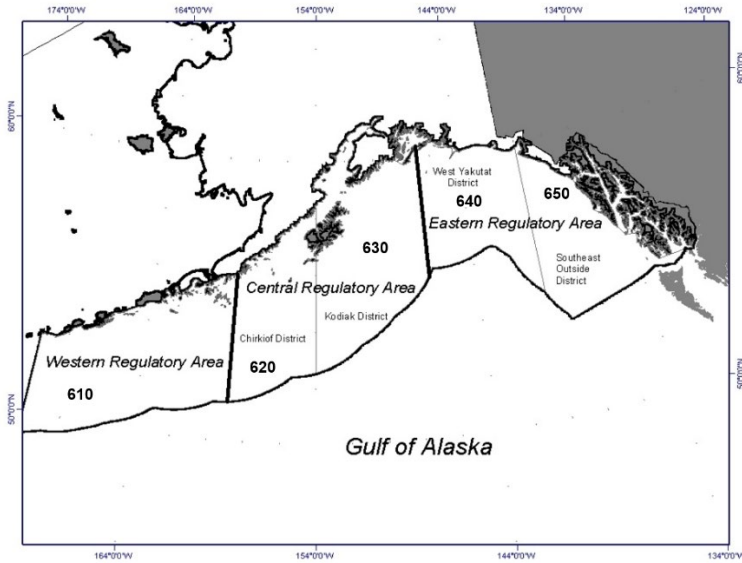


Figure 1-2 Regulatory and reporting areas in the GOA

2. Description of Alternatives

NEPA requires that an EA analyze a reasonable range of alternatives consistent with the purpose and need for the proposed action. The alternatives in this chapter were designed to accomplish the stated purpose and need for the action. The alternatives were designed to increase operational efficiency, reduce administrative burden, clarify how harvesters can meet existing regulatory requirements, and provide more opportunities for the Adak CQE to more fully harvesting its allocation.

The Council initiated analysis of the following alternatives in April 2021.

Alternative 1: No action

Alternative 2: Revise IFQ program regulations to the address the following regulatory clarifications

Element 1: Clarify that “slinky pots” are a legal gear for the IFQ fishery, and revise regulations to allow the use of biodegradable twine in the door latch or pot tunnel.

Element 2: Remove buoy configuration and flagpole requirements in regulation but retain “LP” marking requirement.

Element 3: Authorize jig gear as a legal gear type for the harvest of sablefish IFQ.

Element 4: Revise the pot gear configuration requirements to remove the 9-inch maximum width of tunnel opening so it does not apply when vessel has unfished halibut IFQ onboard.

Element 5: Pot Limits

- Option 1: Change the Pot Limit for WY and/or SEO to
 - Suboption a) 180 pots per vessel
 - Suboption b) 300 pots per vessel

Element 6: Gear Retrieval requirements

- Option 1: Remove the gear retrieval requirement
- Option 2: Modify the gear retrieval requirement to 7 days for all GOA areas
 - Suboption: 3 days in SEO

Alternative 3: Remove Adak CQE residency requirement for a period of five years.

Note: Alternatives 2 and 3 are not mutually exclusive.

The sections below describe current regulations and status quo of issues relevant to the alternatives and elements above, as well as some of the considerations carried through to the analysis.

2.1. Alternative 1: No action

Under Alternative 1, the IFQ fisheries in the BSAI and GOA would be required to operate as described in regulation. The status quo for each element is described in this section and summarized in Table 2-1.

Use of Pot Gear in Fishery (Elements 1, 2, 4, 5, 6)

Slinky Pots and the Biodegradable Panel (Element 1)

With the adoption of pots as legal gear for sablefish, fishermen have developed and are increasingly using lightweight, collapsible slinky pots (described in Section 4.5.2). NMFS has clarified that slinky pots may be used in the IFQ fisheries as long as the pot is equipped with an 18-inch biodegradable panel as described below.

Currently, U.S. Federal regulations at 50 CFR 679.2(15)(i) require:

Each pot used to fish for groundfish must be equipped with a biodegradable panel at least 18 inches (45.72 cm) in length that is parallel to, and within 6 inches (15.24 cm) of, the bottom of the pot, and that is sewn up with untreated cotton thread of no larger size than No. 30.

With the development of slinky pots, this regulation has been met by sewing in one or two full biodegradable panels into the side of the slinky pot, which presumably ends up parallel to and within 6 inches of the seafloor. In the event the pot is lost or abandoned, the biodegradable mesh degrades, leaving a hole which is parallel to and along the bottom of the pot.

While round, tunnel-shaped “slinky pots” do not have a distinct top or bottom, NMFS has concluded that it is possible to configure slinky pots to comply with the regulation. Each 18” panel must be sewn into the mesh covering the frame of a tunnel-shaped pot on the curved surface of the pot (not on a tunnel end).

Some fishery participants have inquired as to whether this concept will work with the slinky pot *doors*, whereby the door would be held closed using a biodegradable line and then the door would need to swing open. Current regulation stipulates a *panel* that is biodegradable, and NMFS has interpreted this to be different than a *door latch*.³ With the goal of providing consistent regulatory guidance to the IFQ fleet, NMFS Office of Law Enforcement has reviewed the regulation and, with other Agency input, determined that the proposed slinky pot door opening does not meet the current regulatory requirement. Therefore, under the existing regulation and under the no action alternative, **wrapping the door closure of a pot with untreated cotton thread does not meet the regulatory definition of a biodegradable panel for any type of pot.**

Buoy Configuration and Flagpole Requirements (Element 2)

Under the status quo/no action alternative, each end of a set of longline pot gear deployed to fish IFQ sablefish in the GOA must have attached a cluster of four or more marker buoys including one hard buoy ball marked with the Federal Fisheries Permit (FFP) number of the vessel deploying the gear or the Alaska Department of Fish & Game vessel registration number, the capital letters “LP”, a flag mounted on a pole, and radar reflector floating on the sea surface. Note that other longline pot gear (not used for sablefish IFQ in the GOA) is only required to have marker buoys marked with the FFP or ADF&G number.

Tunnel opening (Element 4)

Regulations at 50 CFR 679.2(15)(ii) state that each pot used to fish for groundfish must be equipped with rigid tunnel openings that are no wider than 9 inches (22.86 cm) and no higher than 9 inches (22.86 cm), or soft tunnel openings with dimensions that are no wider than 9 inches (22.86 cm). In the BSAI, vessels that are fishing halibut or sablefish IFQ/CDQ are exempt from this requirement when the vessel has unfished halibut IFQ/CDQ onboard.⁴

³ <https://www.fisheries.noaa.gov/alaska/commercial-fishing/longline-pot-gear-gulf-alaska-ifq-sablefish-fishery-frequently-asked>

⁴ 50 CFR 679(15)(iii) *Halibut retention exception*. If required to retain halibut when harvesting halibut from any IFQ regulatory area in the BSAI, vessel operators are exempt from requirements to comply with a tunnel opening for pots when fishing for IFQ or CDQ halibut or IFQ or CDQ sablefish in accordance with §679.42(m).

Pot Limits (Element 5)

Vessels that fish sablefish using pots must adhere to pot limits which are specific to each subarea. Current pot limits across the GOA are as follows: SE- 120; WY- 120; WG - 300; CG- 300. There are no pot limits in the BSAI.

Gear Retrieval Requirements (Element 6)

Current gear retrieval requirements are as follows:

- In SE, catcher vessels (CVs) must remove the gear from the fishing grounds when making a sablefish landing, and catcher processors (CPs) must remove the gear from the grounds within 5 days.
- WY/CG - 5 days;
- WG - 7 days;
- BSAI - no gear retrieval requirements

Jig gear (Element 3)

Currently, jig gear may not be used for sablefish in the GOA and BSAI, only halibut.⁵

Table 2-1 Comparison of GOA/BSAI status quo regulations and potential changes to the elements under Alternative 2.

	GOA status quo	BSAI status quo	Action Alternative (Alt 2)
Element 1: Biodegradable panel	Biodegradable panel regs currently the same. Slinky pots are legal, permitting they comply with the following: <i>Each pot used to fish for groundfish must be equipped with a biodegradable panel at least 18 inches (45.72 cm) in length that is parallel to, and within 6 inches (15.24 cm) of, the bottom of the pot, and that is sewn up with untreated cotton thread of no larger size than No. 30.</i>		Allow the use of biodegradable twine in the door latch or pot tunnel of pots used to fish for groundfish. Regs GOA- and BSAI-wide would change but be consistent between GOA and BSAI.
Element 2: Buoy and flagpole requirements	Each end of a set of longline pot gear deployed to fish IFQ sablefish in the GOA must have attached a cluster of four or more marker buoys including one hard buoy ball marked with the capital letters "LP", a flag mounted on a pole, and radar reflector floating on the sea surface.	One hard buoy ball marked with the capital letters "LP" and ADFG/FFP number.	Only difference between BSAI and GOA is that radar reflectors would still be required in the GOA and both ends are required to be marked in GOA.

⁵ <https://meetings.npfmc.org/CommentReview/DownloadFile?p=130f0534-8ec8-429f-8591-34538958b459.pdf&fileName=E1%20Jig%20Gear%20for%20IFQ%20Regulatory%20Explanation.pdf>

	GOA status quo	BSAI status quo	Action Alternative (Alt 2)
<u>Element 3:</u> Authorize use of jig gear for sablefish (in GOA)	Jig gear not legal for sablefish [Jig gear legal for halibut]	Jig gear not legal for sablefish. [Jig gear legal for halibut.]	Jig gear would be legal in GOA and BSAI for sablefish [and continue to be legal for halibut.]
<u>Element 4:</u> Tunnel opening	Each pot must be equipped with rigid tunnel openings that are no wider than 9 inches and no higher than 9 inches, or soft tunnel openings with dimensions that are no wider than 9 inches.	Limit of 9-inch maximum width of tunnel opening does not apply when vessel has unfished halibut IFQ/CDQ onboard.	Regs would be consistent across GOA and BSAI: Limit of 9-inch maximum width of tunnel opening does not apply when vessel has unfished halibut IFQ/CDQ onboard.
<u>Element 5: Pot limits</u>	Current pot limits: SE- 120 WY- 120 WG – 300 CG- 300	No pot limits	GOA pot limits: SE- 180/300 WY- 180/300 WG-300 CG-300 BSAI – no limits
<u>Element 6: Gear retrieval requirements</u>	SEO CPs 5 days SEO CVs must remove the gear from the fishing grounds when making a sablefish landing WY/CGOA CV/CPs 5 days WGOA CV/CPs 7 days BSAI no requirements	No gear retrieval requirements	Option 1 – No gear retrieval requirements GOA/BSAI wide. Option 2: GOA- 7 days. BSAI- no requirement • Suboption: 3 days in SEO

Adak CQE Residency Requirements

The CQE residency requirements at 50 CFR 679.41 for the Adak CQE would remain in place. An individual applying to receive IFQ from QS held by a CQE must be an eligible community resident of the eligible community in whose name the CQE is holding QS. An eligible community resident as related to this action would be defined as any individual who:

(i) Is a citizen of the United States;

(ii) Has maintained a domicile in a rural community listed in Table 21 to this part for the 12 consecutive months immediately preceding the time when the assertion of residence is made, and who is not claiming residency in another community, state, territory, or country; and

(iii) Is an IFQ crew member except when that person is receiving halibut or sablefish IFQ that is derived from QS held by a CQE on behalf of an eligible community in the Aleutian Islands.

Additionally, regulations at 50 CFR 679.41(g)(6) states that IFQ derived from QS held by a CQE on behalf of an eligible community: (ii) In the Aleutian Islands subarea may be used by any person who has received an approved Application for Eligibility ... prior to March 17, 2019 and only by an eligible community resident of Adak, AK, after March 17, 2019.

2.2. Alternative 2

Alternative 2 includes several elements that would revise IFQ program regulations; see also Table 2-1.

Use of Pot Gear in Fishery (Elements 1, 2, 4, 5, 6)

Biodegradable Panel (Element 1)

Under Element 1, pots used for IFQ fishing could use a biodegradable twine (untreated cotton thread no larger than No. 30) to wrap the door closure of a pot that otherwise meets regulatory requirements. Staff have analyzed this element under the assumption that the Council's intent is for this element to apply in the GOA and BSAI, but only to slinky pots used to fish IFQ. If this is not the Council's intent, analysts ask the Council to clarify the scope of this element and if it should apply to all pots used to fish IFQ, included conventional pots.

Buoy Configuration and Flaggpole Requirements (Element 2)

Alternative 2, Element 2, proposes to remove the requirement in the GOA to have a cluster of four buoys and remove the flagpole requirement but retain the "LP" marking requirement. Under Alternative 2, buoys would also continue to be marked with the vessel's Federal fisheries permit number or ADF&G vessel registration number, and the radar reflector would still be required. As written, these requirements for the GOA would mirror the regulations in the BSAI, with the only difference being the additional requirement of a radar reflector required for longline pot gear deployed to fish sablefish IFQ in the GOA unless the Council chooses to remove that requirement as part of this action.

Tunnel opening (Element 4)

Element 4 would remove the requirement for a 9-inch maximum width of tunnel opening in the GOA. Section 2.1 explains that certain vessels are already exempt from this requirement in the BSAI. Removing this requirement in the GOA would provide flexibility for fishermen to use pots that more effectively select for their target catch. This flexibility may allow harvesters to target halibut more effectively (particularly in the presence of whales that depredate on HAL gear), or it may allow them to select for different sizes of sablefish. Regulations in the BSAI and GOA already allow retention of halibut in pots (NPFMC 2019; [85 FR 840](#)).⁶ Those who are fishing sablefish or halibut with pot gear would continue to be required to retain legal-size incidentally-caught halibut for which they have the necessary quota.

Pot limits (Element 5)

Element 5 would change the pot limit for the GOA areas of WY and/or SEO to either 180 or 300 pots per vessel. This element would not modify pot limits for the BSAI.

Gear retrieval requirements (Element 6)

Alternative 2, Element 6, Option 1 would remove the GOA pot gear retrieval requirements altogether. If implemented, requirements across all GOA and BSAI areas would be consistent. Alternative 2, Element

⁶ Corrected FR 84 FR 57687.

6, Option 2 would modify the gear retrieval requirement to be 7 days for all GOA areas. There is also a suboption that the GOA SEO area would have a pot limit of 3 days in SEO.

Jig gear (Element 3)

Alternative 2, Element 3 would authorize jig gear as a legal gear type for the harvest of sablefish IFQ in the BSAI and GOA.

2.2.1. Comparison of the impacts of Alternatives 1 and 2

Table 2-2 provides a comparison of the impacts of the relevant status quo regulations in the IFQ fisheries (Alternative 1) and the proposed changes under Alternative 2.

Table 2-2 Comparison of main expected impacts of Alternative 1 and 2.

	Alt 1, No action IMPACTS	Alt 2 IMPACTS
<u>Element 1: Biodegradable panel</u>	<p>[Use of biodegradable twine in door latch or pot tunnel not permitted].</p> <p>- Cost/time impacts on harvesters: Any pots designed not in compliance need to be reconfigured to comply.</p> <p>-Potential that cutting the mesh to sew the bio. twine may compromise the mesh and the pot/any catch in the pot.</p>	<p>[Biodegradable “latch” method]:</p> <p>Environmental impacts: Depends on several factors described in Section 5.2.1. Impacts are uncertain but may not be significantly different from status quo.</p> <p>-Pots would not to be need to be reconfigured.</p> <p>-Reduce possibility of losing haul if pots are fished as designed.</p>
<u>Element 2: Buoy and flagpole requirements</u>	<p>Additional burden specific to GOA pot fishermen to purchase, carry and deploy extra gear.</p>	<p>[Remove 4 buoy cluster and flagpole].</p> <p>-Increased stability and space on deck, decreases burden on vessel and deployment effort for crew (Section 4.7.2).</p>
<u>Element 3: Authorize use of jig gear for sablefish (in GOA)</u>	<p>[Jig gear not legal for GOA sablefish].</p> <p>-Potential for IFQ to go unfished if jig gear is only gear type with which to harvest IFQ, or not maximizing efficiency if it is the most suitable gear for an IFQ holder’s operation.</p>	<p>[Jig gear for sablefish authorized]</p> <p>-Potential but unknown changes to catch composition (Section 5.3 and 5.4)</p> <p>-Increased ability to harvest IFQ for some participants (Section 4.7.3)</p>

	Alt 1, No action IMPACTS	Alt 2 IMPACTS
<u>Element 4:</u> Tunnel opening	IFQ fishermen cannot target halibut or larger sablefish more efficiently.	[Limit of 9-inch maximum width of tunnel opening does not apply when vessel has unfished halibut IFQ/CDQ onboard.] -Potential changes to catch/bycatch composition
<u>Element 5: Pot limits</u>	Harvesting operations may be inefficient for those who fish IFQ with pot gear (Section 4.7.5)	Change the GOA Pot Limit for WY and/or SEO to: <ul style="list-style-type: none"> • Option a) 180 pots per vessel • Option b) 300 pots per vessel Increased number of pots may increase operational efficiency. (Section 4.7.5) Potential for increased gear conflicts with HAL gear (Section 4.7.5) Additional pots (especially slinky pots) may have different size selectivity; currently lack data collection methods that demonstrate differences in gear (Section 4.9.1)
<u>Element 6: Gear retrieval requirements</u>	Harvesting operations may be inefficient for those who fish IFQ with pot gear (Section 4.7.5)	Option 1: Remove the gear retrieval requirement Option 2: Modify the gear retrieval requirement to 7 days for all GOA areas <ul style="list-style-type: none"> • Suboption: 3 days in SEO Increased operational efficiency (Section 4.7.5) Potential for increased gear conflicts with HAL (Section 4.7.5)

2.3. Alternative 3

Alternative 3: Remove Adak CQE residency requirement for a period of five years.

Alternative 3 would suspend the residency requirements applicable to the Adak Community Quota Entity (CQE) Program for 2021 (50 CFR 679.41(g)(6)(ii)) for five years, similar to the final rule which implemented the residency exemption for the first five years of the program ([79 FR 8870, February 14, 2014](#)). Regulations currently require that an individual must have maintained a domicile in a rural community for 12 consecutive months to be an *eligible community resident* and receive QS from a CQE. This alternative would allow the ACDC, the non-profit who has purchased and holds halibut and sablefish IFQ for use by residents of Adak, to lease QS derived from CQE held halibut and sablefish IFQ to residents *and* non-residents for a period of five years. For the purposes of this action, non-residents would still be required to be a citizen of the United States.

Comparison of Alternatives 1 and 3

The expected impacts from Alternative 3 as compared with the status quo are mainly the potential for increased ability to fully harvest CQE-held IFQ, and associated socioeconomic benefits for the community of Adak. Non-residents that would like to harvest CQE-held IFQ, but who are not considered

residents of Adak, are likely to benefit from an entry-level opportunity to fish IFQ without the financial burden of purchasing their own QS. Additionally, minimal indirect economic impacts to the community could also be a result of this action, if non-residents eventually become residents and stay in the community, or through monetary benefits from fees associated with leasing IFQ through the CQE. The practical effect of Alternative 3 depends on whether non-residents choose to lease ACDC-held IFQ, which is also influenced by maintaining processing operations in the community. Alternative 3 could help maintain access to and participation in the IFQ fisheries. No significant effect on individual participants in the IFQ fisheries, or residents of non-CQE communities, is anticipated under Alternative 3 compared to the status quo. Aside from the public reports provided annually by ACDC, data on CQE-held IFQ are limited and data that do exist are confidential.

3. Approach to Alternative 2 Analysis

As described in Section 1.2, Amendment 101 allowed the use of sablefish longline pots in the GOA ([81 FR 95435](#)). When the action was implemented in 2017, pot longline gear was also made legal for halibut retention in all areas off Alaska, provided such retention was authorized by NMFS. In February 2020, halibut retention in pots in the BSAI was authorized by NMFS through BSAI Amendment 118 ([85 FR 840](#)). These actions afforded IFQ fishery participants the flexibility to use pot gear to fish for both IFQ halibut and sablefish; an important transition for many vessels and QS holders to avoid whale depredation on HAL gear. Due to this regulatory flexibility, many vessels in the GOA and BSAI have reconfigured their vessels or operations to use pot gear either instead of, or in addition to HAL gear. The number of vessels that have been used to fish IFQ with each gear type (HAL vs pot or both) are shown in Table 3-1 (GOA) and Table 3-2 (BSAI). Other vessels continue to fish with HAL gear, either because the benefits of using HAL continue to outweigh the costs of switching gear (some areas do not experience high levels of whale depredation and therefore IFQ fisherman can still achieve sufficient CPUE for their operations), or they may intend to switch gear types in the future but have not yet done so.

Table 3-1 Number of vessels that harvested IFQ in the GOA, by gear type

IFQ Vessels by Gear Type				
Year	# Pot vessels	# HAL vessels	All vessels that fished GOA IFQ	Vessels that fished both pot and HAL
2014			887	0
2015			839	0
2016			830	0
2017	22		803	17
2018	23		780	17
2019	32		772	24
2020	105		712	85
2021	119		529	88

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA

Table 3-2 Number of vessels that harvested IFQ in the BSAI, by gear type

IFQ Vessels by Gear Type				
Year	# Pot vessels	# HAL vessels	All vessels that fished BSAI IFQ	Vessels that fished both pot and HAL
2014	4		94	0
2015	3		92	1
2016	4		90	1
2017	6		99	1
2018	9		94	2
2019	8		92	2
2020	14		73	7
2021	10		38	5

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA

The analyses for GOA Amendment 101 and BSAI Amendment 118 included the potential socioeconomic and environmental impacts of a redistribution of effort from vessels using HAL gear to those using pot gear in the IFQ fisheries. Since then, fishery participants have experimented with a variety of gear

configurations and designs and increased their knowledge of how to improve harvesting efficiency for their operations, as indicated in the GOA Sablefish Pots Review (NPFMC 2021) and in public testimony provided at IFQ, AP, and Council meetings.

The action analyzed in this document provides *additional* flexibilities for IFQ participants, in response to testimony and the experiences of IFQ fishery participants using pot gear thus far. Therefore, this analysis focuses on any *incremental* increase in the use of pot gear to harvest sablefish and halibut IFQ that would occur *as a result of this action*.

The impact analyses in both the RIR and the EA are predicated on the reasoning that the expected impacts are dependent on two main factors: (1) the extent to which the flexibilities from this action encourage further participation in the pot (or jig) fisheries (described above) and (2) the extent to which fishery participants choose to use the flexibility provided through the elements under Alternative 2 (e.g., number of vessels that potentially use more pots if the pot limit were increased under Element 5). It is through this framing that the effects on socioeconomic and environmental components have been analyzed, and these factors are discussed throughout the impact analyses.

4. Regulatory Impact Review

This Regulatory Impact Review (RIR) examines the benefits and costs of a proposed regulatory amendments to the IFQ Program, including several elements and options described in Section 2. The proposed action may affect IFQ QS holders and crew members, NMFS staff involved in data collection and management for the IFQ fisheries, the CQE representing the city of Adak, Alaska, and fishery participants receiving IFQ derived from QS held by the Adak CQE, processors, and the community of Adak.

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

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

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

- Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President’s priorities, or the principles set forth in E.O. 12866.

4.1. Statutory Authority

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

The sablefish IFQ fishery in the EEZ off Alaska is managed under the FMP for Groundfish of the GOA and under the FMP for Groundfish of the BSAI. The Council prepared the FMPs under the authority of the Magnuson-Stevens Act, 16 U.S.C. 1801 *et seq.* Regulations governing U.S. fisheries and implementing the FMPs appear at 50 CFR parts 600 and 679.

The IPHC and NMFS manage fishing for Pacific halibut through regulations established under the authority of the Northern Pacific Halibut Act of 1982 (Halibut Act). The IPHC develops regulations governing the halibut fishery under the Convention between the United States and Canada for the Preservation of the Halibut Fishery of the Northern Pacific Ocean and Bering Sea. The IPHC's regulations are subject to approval by the Secretary of State with the concurrence of the Secretary. NMFS promulgates the IPHC's regulations as annual management measures pursuant to 50 CFR 300.62. The final rule implementing the 2021 annual management measures published February 18, 2021, [86 FR 13475](#)).

The Halibut Act, 16 U.S.C. 773c (a) and (b), provides the Secretary with general responsibility to carry out the Convention and the Halibut Act. In adopting regulations that may be necessary to carry out the purposes and objectives of the Convention and the Halibut Act, the Secretary is directed to consult with the Secretary of the department in which the U.S. Coast Guard is operating, currently the Department of Homeland Security.

The Halibut Act, 16 U.S.C. 773c (c), also provides the Council with authority to develop regulations, including limited access regulations, that are in addition to, and not in conflict with, approved IPHC regulations. Regulations developed by the Council may be implemented by NMFS only after approval by the Secretary. The Council has exercised this authority in the development of the IFQ Program for the commercial halibut and sablefish fisheries, codified at 50 CFR part 679, under the authority of section 5 of the Halibut Act (16 U.S.C. 773c (c)) and section 303(b) of the Magnuson-Stevens Act (16 U.S.C. 1853(b)).

The proposed action under consideration would amend these FMPs and Federal regulations at 50 CFR 679. Actions taken to amend FMPs or implement regulations governing these fisheries must meet the requirements of applicable Federal laws, regulations, and Executive Orders. Because halibut and sablefish are managed under the authority of Halibut Act, and Magnuson-Stevens Act, respectively, any regulations applicable to the management of both must be consistent with provisions of both laws.

4.2. Purpose and Need for Action

In April 2021, the Council adopted the following purpose and need statement to originate this action.

IFQ stakeholders, the IFQ Committee, and NMFS have identified regulatory revisions that could increase operational efficiency, reduce administrative burden, and clarify how harvesters can meet existing regulatory requirements. In addition, the Council is considering revisions to pot limits and gear tending restrictions also identified through the recent 3-year GOA sablefish pot review to determine whether they are serving their intended purpose.

The Community Quota Entity (CQE) program was modified in 2014 to include the Aleutian Islands. This allowed the community of Adak to form a CQE and purchase halibut and sablefish quota. Since the implementation of the Aleutian Islands CQE in 2014, Adak has faced challenges being able to harvest its IFQ. The Council is considering temporarily broadening who is eligible to harvest IFQ held by the Adak CQE to provide more opportunities for more fully harvesting its allocation.

4.3. Alternatives

In April 2021, the Council initiated analysis with the following alternatives and elements:

Alternative 1: No action

Alternative 2: Revise IFQ program regulations to the address the following regulatory clarifications

Element 1: Clarify that “slinky pots” are a legal gear for the IFQ fishery, and revise regulations to allow the use of biodegradable twine in the door latch or pot tunnel.

Element 2: Remove buoy configuration and flagpole requirements in regulation but retain “LP” marking requirement.

Element 3: Authorize jig gear as a legal gear type for the harvest of sablefish IFQ.

Element 4: Revise the pot gear configuration requirements to remove the 9-inch maximum width of tunnel opening so it does not apply when vessel has unfished halibut IFQ onboard.

Element 5: Pot Limits

- Option 1: Change the Pot Limit for WY and/or SEO to
 - Suboption a) 180 pots per vessel
 - Suboption b) 300 pots per vessel

Element 6: Gear Retrieval requirements

- Option 1: Remove the gear retrieval requirement
- Option 2: Modify the gear retrieval requirement to 7 days for all GOA areas
 - Suboption: 3 days in SEO

Alternative 3: Remove Adak CQE residency requirement for a period of five years.

Note: Alternatives 2 and 3 are not mutually exclusive.

4.4. Reference Documents Used for the Impact Analysis

This analysis of impacts provides a qualitative assessment supported by recent fisheries data and numerous other recent analyses and reference documents. The costs and benefits, as well as the economic impacts of this action are described in the sections that follow, by comparing the No Action Alternative 1 with the action Alternatives 2 and 3. Reference documents include a plethora of detailed information on the dynamics of the fisheries, markets, and communities associated with the impacted sectors. In particular, the description of fisheries and analysis draws from recent analyses and reports:

Environmental Assessment/Regulatory Impact Review for Amendment 101 to the FMP for Groundfish of the GOA: Allow the use of pot longline gear in the GOA sablefish IFQ fishery (NMFS 2015).

The Amendment 101 EA analyzed proposed management measures that would allow a new gear type to harvest sablefish in the GOA. The Amendment 101 summarizes the evaluations rendered for fisheries, marine resources, and ecosystem components and is referenced in this EA. This document is available from: <https://www.fisheries.noaa.gov/action/amendment-101-fmp-groundfish-gulf-alaska-management-area>

Review of Gulf of Alaska Groundfish Fishery Management Plan Amendment 101 to Allow Pot Longline Gear in the Sablefish IFQ Fishery (NPFMC 2021).

This document reviewed the first 3-4 years of fishery data from the GOA sablefish pot fishery. This document is available from <https://meetings.npfmc.org/CommentReview/DownloadFile?p=1cee7277-52dc-405c-887b-c28d9d62ab92.pdf&fileName=D1%20GOA%20Sablefish%20Pots%20Report.pdf>

Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program (NPFMC 2010)

The Program Review provides a summary of the CQE Program and participation in the CQE program from its inception in the late 1990s until 2010. The review outlines the criteria for community eligibility, QS holdings by CQE communities to the date the review was conducted, methods for funding QS purchase, and common issues and barriers CQEs experience. This document is available from <https://www.npfmc.org/wp-content/PDFdocuments/halibut/CQEREport210.pdf>.

RIR for Amendment 102 to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands Establishing a Community Quota Entity in Area 4B (NMFS 2014b)

This RIR evaluates a proposed program that would allow eligible communities located in Area 4B of the Aleutian Islands to purchase catcher vessel QS under the existing halibut and sablefish IFQ Program. The document compares a No Action alternative to an Alternative that would establish a CQE Program in Area 4B and allow a non-profit entity representing an eligible community in Area 4B (Adak) to purchase and hold Area 4B halibut QS and Aleutian Island sablefish QS, with similar qualifying criteria and operational limits as the existing GOA CQE communities. This document is available from <https://repository.library.noaa.gov/view/noaa/19200>.

For this analysis, tables, figures, and information from these sources were often updated using quantitative data on harvest, harvesting vessels, value, and processor activity from 2008-2020 obtained through the Alaska Fishery Information Network (AKFIN). AKFIN has access to catch accounting system (CAS) data. Total catch estimates are generated from information provided through a variety of required industry reports of harvest and at-sea discard, and data collected through an extensive fishery observer program. In 2003, NMFS changed the methodologies used to determine catch estimates from the NMFS blend database (1995 through 2002) to the catch accounting system (2003 through present). Currently, the catch accounting system relies on data derived from a mixture of production and observer reports as the basis of the total catch estimates. This analysis relies on catch estimates during years more recent than 2003. AKFIN also has access to CFEC Fish Ticket data, wholesale data from Commercial Operators Annual Reports (COAR), and Economic Data Report (EDR) data for those fisheries that provide it. As a small, remote community, Adak has few fishery participants and some data are limited to due confidentiality. Some information was gathered from the annual CQE reports (ACDC 2019; ACDC 2020).

Additional qualitative context, where helpful, was provided by NMFS and Council staff, as well as industry fishery representatives, CQE participants, and ACDC board members. Section 7 provides a list of people consulted and Section 8 provides a full list of references.

4.5. Description of Fisheries

4.5.1. The IFQ Program

The fixed gear halibut and sablefish fisheries off Alaska are managed under the IFQ program. The 20-year review of the IFQ program was published in 2016 and provides a detailed description of the fisheries, their history, and management.⁷ The reader is referred to the 20-year review for additional background information, however a concise overview is provided here.

The Council and NMFS developed the IFQ Program to resolve the conservation and management challenges commonly associated with open access fisheries. The Council recommended a limited access

⁷ https://www.npfmc.org/wp-content/PDFdocuments/halibut/IFQProgramReview_417.pdf

privilege program (LAPP) for the fixed gear halibut and sablefish fisheries off Alaska in 1992. NMFS approved the halibut IFQ and sablefish IFQ Programs in 1993 and implemented them on November 9, 1993 (58 FR 59375). Fishing under the IFQ Program began on March 15, 1995. The preamble to the proposed rule, published on December 3, 1992 (57 FR 57130), describes the issues leading to the Council's recommendation for the IFQ Program to the Secretary. The Council and NMFS designed the IFQ Program to provide economic stability to the commercial halibut and sablefish fixed gear fisheries and intended the IFQ Program to improve the long-term productivity of the halibut and sablefish fisheries by promoting the conservation and management objectives of the MSA and the Halibut Act; while retaining the character and distribution of the fishing fleets as much as possible. Sablefish and halibut IFQ seasons are typically set simultaneously to reduce waste and discards. The season dates have varied by several weeks since 1995, but the annual pattern for both fisheries has been from March to November.

The IFQ Program is a catch share program where participants are given a proportional annual allocation based on the amount of QS they hold and the catch limit set by the IPHC for halibut or by the Secretary for sablefish. As described in Section 1.3, there are eight halibut IFQ regulatory areas (Figure 1-1) in Alaska, inclusive of Areas 2C through 4E. For the sablefish IFQ fishery, there are two FMP areas: BSAI and GOA. Management areas are further broken out into the Bering Sea, Aleutian Islands, Western GOA, Central GOA, West Yakutat, and Southeast. Only sablefish harvested in the EEZ are managed under the IFQ Program. State water sablefish fisheries are managed by the State of Alaska. QS was originally issued to participants based on participation in the fisheries during historical qualifying periods in each of these areas and is generally restricted to use on the size class of vessel it was originally earned on.

During the development of the IFQ Program, the Council was concerned about consolidation of ownership and divestiture of QS by coastal communities and removing small community access to and participation in the fisheries. For this reason, the Council built in several provisions to address concerns regarding transferability and the goal of preserving an owner-operated fleet. The goal was to protect small operations, part-time participants, and entry-level participants who may tend to be eliminated from rationalized fisheries because of potential excessive consolidation under the IFQ Program. The Program includes restrictions designed to prevent too many QS from falling into too few hands (ownerships caps) or from being fished on too few vessels (vessel use caps).

The Council designed a "block provision" to further guard against excessive consolidation of QS and consequent social impacts on the fishery and dependent communities. A block is a consolidation of QS units that may not be divided. Most initially issued QS that resulted in less than the equivalent of 20,000 pounds (9 mt) of IFQ (in 1994-pound equivalents) was "blocked," that is, issued as an inseparable unit. One of the primary purposes of QS blocks and the amendments to the block provisions was to conserve small blocks of QS that could be purchased at a relatively low cost by crew members and new entrants to the IFQ fisheries. The block provision reduced the amount of QS consolidation that could have occurred under the IFQ Program and slowed consolidation by restricting QS transfers. Over time, the Council and NMFS have amended the Program to remove constraints so that greater amounts of QS can be swept-up into larger amounts that could be fished more economically.⁸

Other restrictions, such as the **QS class designations**, which represent the length of vessel that is permitted to harvest that IFQ, are intended to prevent the fishery from being dominated by large boats or by any particular vessel class. Under these class designations, halibut QS were originally assigned under the one of the following four vessel categories:

Class A - designated for vessels that process at sea or catcher-processors (freezer longliner vessels) and do not have a vessel length restriction;

⁸ GOA Amendment 43 ([61 FR 67962, December 26, 1996](#)), and GOA Amendment 67 ([72 FR 44795, August 9, 2007](#)).

Class B - catcher vessels greater than 60' LOA;

Class C - catcher vessels 36' to 60' LOA; or

Class D - catcher vessels 35' LOA or less.

Sablefish QS are assigned under one of three vessel categories:

Class A- catcher-processor vessels;

Class B- catcher vessels greater than 60 feet in length;

Class C- catcher vessels less than 60 feet in length.

The categories were designed to maintain a diverse, owner-operated fleet and provide more entry-level opportunities in the IFQ fisheries. The Council intended for the D class QS to be the most likely entry-level opportunity, as it was thought that entry-level fishermen would be using smaller, D class vessels (NPFMC 2016).

D class QS were originally intended, in part, to provide an affordable opportunity for skippers and crew members to buy into the fishery. According to the Twenty-Year Review (NPFMC 2016b), in Area 3A between 1995 and 2014, the mean price in dollars per IFQ pound of D class QS was lower than that of C class QS every year except 2010 (NOAA Fisheries, RAM 2015).⁹ Despite this trend in Area 3A, in many years, D class QS aggregated across all regulatory areas is not the lowest price QS in the halibut IFQ fishery. This could mean that Class D QS is not always the QS that is most accessible to new entrants and small operators. Additionally, fishery participants have noted that crew members looking to buy into the fishery may actually purchase C class QS and fish it on a larger boat with other QS holders rather than purchase D class QS and fish the IFQ on a smaller D class vessel. Furthermore, a relatively small amount of D class IFQ is designated in each area (6.8% in Area 3A), which affects availability of QS for new entrants.¹⁰

Since the implementation of the IFQ Program, numerous amendments have lifted the original vessel length landing restrictions of the QS vessel class designations. In 1996, the “fish down” provision allowed IFQ derived from larger class QS to be fished on smaller class vessels.¹¹ The current vessel length categories in Table 4-1 reflect the “fish-down” provision. The Council has also amended the IFQ Program to allow “fishing up” in some areas. Fishing up occurs when the IFQ derived from smaller class QS is fished on larger class vessels. Safety issues and economic hardships prompted Council action to allow these shares to be fished up on C class vessels in certain areas, such as in Areas 3B, 4B, and 4C.

Table 4-1 Current harvest authority for halibut under specific vessel categories.

Vessel Category	Authority
A	May harvest and process IFQ halibut on a vessel of any length (freezer/longliners)
B	May harvest IFQ halibut on a vessel of any length
C	May harvest IFQ halibut on a vessel ≤ 60 ft LOA
D	May harvest IFQ halibut on a vessel ≤ 35 ft LOA

⁹ Price in \$/IFQ factors in TAC. Due to a significant database change, 1999 data were not available. Until 2015, the NOAA Fisheries RAM Program provided regular IFQ reports that documented information on QS transfers and prices (any transaction resulting in a permanent change of ownership is considered a transfer). “Changes under Alaska’s Halibut IFQ Program, 1995 – 2014”, published in August 2015, provides the estimated annual prices for halibut QS sold with the associated current year IFQ, by area and year.

¹⁰See NPFMC 2016 for further discussion on how the IFQ Program has performed with respect to its original policy objectives, including those regarding entry opportunities.

¹¹ Implemented through GOA and BSAI Amendments 42 ([61 FR 43312, August 22, 1996](#)) and Federal regulations at [50 CFR 679.40\(a\)\(5\)\(ii\)](#).

The IFQ Program provides flexibility to participants by allowing them to harvest their IFQ allocations at any point during the nine-month IFQ season. Despite this flexibility, landings over time in the IFQ fisheries generally follow consistent seasonal patterns (Figure 4-1; Figure 4-2) due to participation of crew and IFQ holders in other fisheries, market conditions, vessel availability, seasonal employment, and other factors.

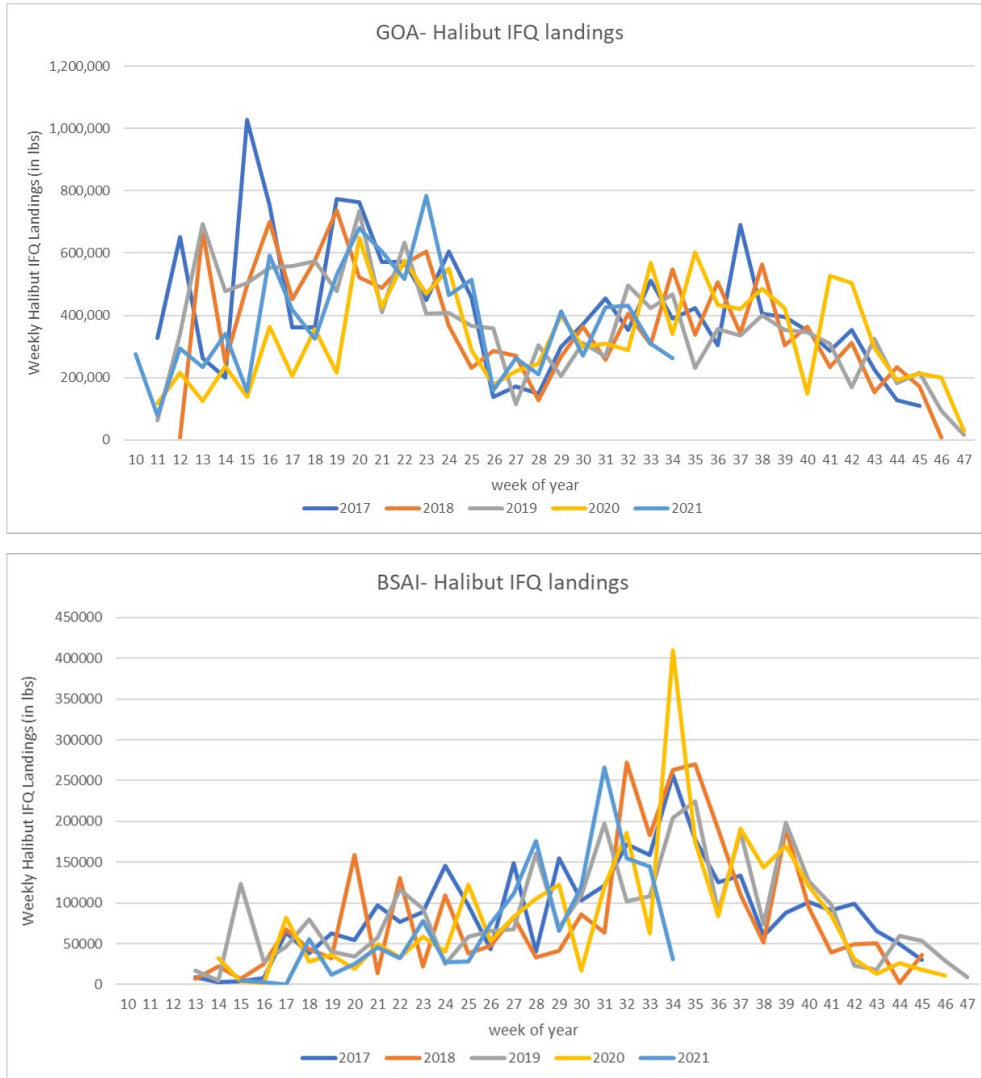


Figure 4-1 Weekly Halibut IFQ Landings, 2019-2021

Source: <https://www.fisheries.noaa.gov/alaska/commercial-fishing/fisheries-catch-and-landings-reports>

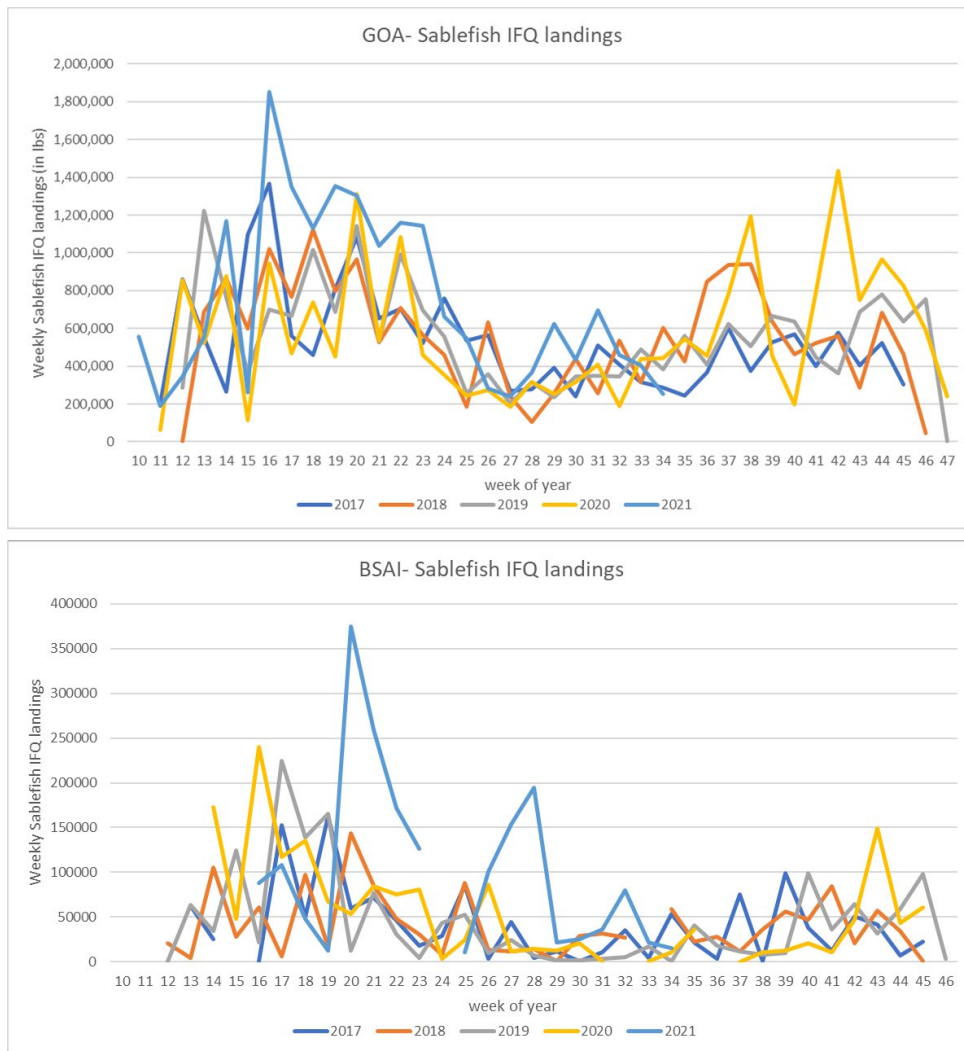


Figure 4-2 Weekly Sablefish IFQ Landings, 2019 and 2020

Source: <https://www.fisheries.noaa.gov/alaska/commercial-fishing/fisheries-catch-and-landings-reports>

4.5.2. IFQ pot fisheries

Expanding use of pot gear

Overall, use of pot gear is increasing in both the BSAI and GOA (Figure 4-3). Using pot gear instead of traditional HAL gear has several benefits, including avoiding whale depredation of target catch and reducing bycatch during the active fishery (described in NPFMC 2021).¹² A regulatory amendment in 1992 prohibited longline pot gear in the BS ([57 FR 37906, August 21, 1992](#)). In 1996, the prohibition on sablefish longline pot gear use was removed for the BS, except from June 1 to 30 to prevent gear conflicts with trawlers during that month ([61 FR 49076, September 18, 1996](#)). Sablefish longline pot gear was allowed in the AI during this time.

While pot fishing was common in the BSAI IFQ sablefish fishery in the 2000s, the popularity of pot fishing made a resurgence in the BSAI since the legalization of halibut retention in pot gear in 2020. On average, the percent of IFQ sablefish catch in the BS taken by pot gear was 29% from 2003-2009, <1%

¹²In this analysis, the term "target" is used to indicate the species that the vessel is primarily attempting to harvest; gear may be designed or fished in a certain way (in terms of depth, location, and specifications) to better select for certain species.

from 2010-2016, and 60% from 2017-2020. In the AI, it was 10% from 2003-2009, 2% from 2010-2016, and 49% from 2017-2020. Sablefish pot fishing (with legal retention of halibut) in the GOA IFQ fishery has been allowed under regulations since 2017 (81 FR 95435, January 27, 2017). The increases in pot fishing the GOA since 2017 have been similarly dramatic to the BSAI, though there are differences among management areas. Table 4-2 shows the increase in harvest of IFQ sablefish in pot gear in the GOA, particularly in 2020. Much of the increase of pot fishing in both areas can be attributed to the development of lightweight, collapsible slinky pots that can be fished on both large and small vessels.

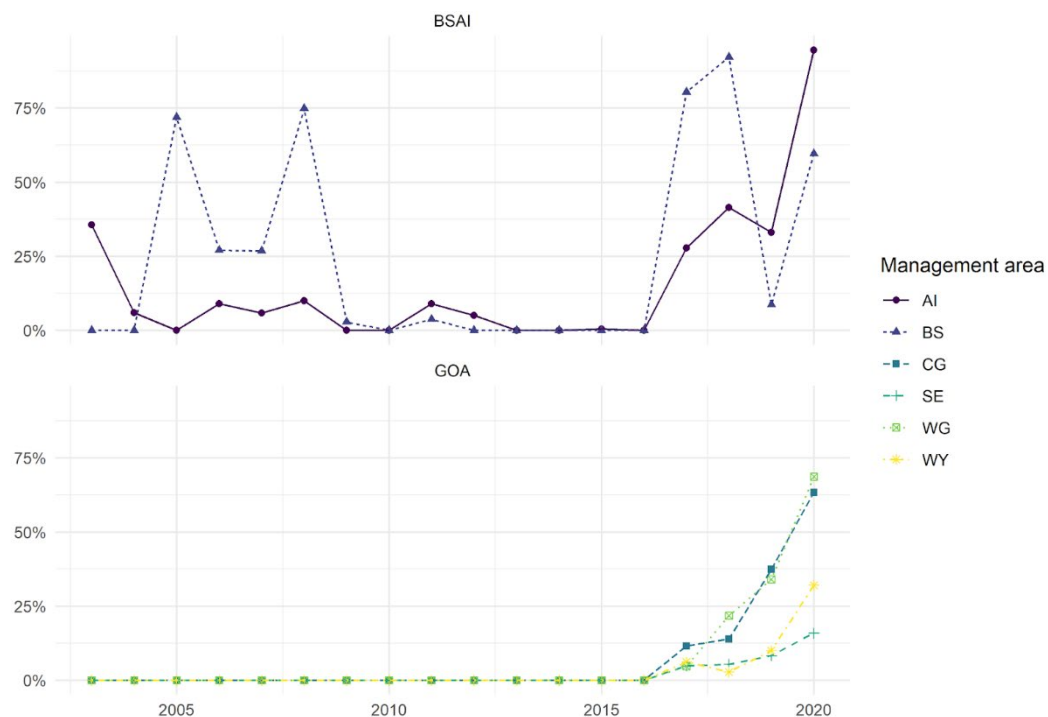


Figure 4-3 Percentage of IFQ sablefish catch by pot gear by FMP and management area.

Source: AKRO/AKFIN (COUNCIL.COMPREHENSIVE_BLEND_CA accessed July 14, 2021)

Table 4-2 Percent of sablefish IFQ landed by pot/HAL in each GOA subarea

Year	WG		CG		WY		SE	
	% Pot	% HAL	% Pot	% HAL	% Pot	% HAL	% Pot	% HAL
2017	22%	78%	12%	88%	7%	93%	5%	95%
2018	33%	67%	16%	84%	2%	98%	5%	95%
2019	37%	63%	31%	69%	9%	91%	8%	92%
2020	85%	15%	67%	33%	33%	67%	16%	84%

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA

The GOA Sablefish Pots Review (NPFMC 2021) included descriptions and figures of some of the different pot gear designs (rectangular, trapezoidal, conical, collapsible/slinky, and stackable) that have been used in the sablefish pot fishery. As mentioned, the development of slinky pots (

Figure 4-4) has enabled harvesters with smaller boats to transition to pot gear without having to drastically alter their vessels. Some fishery participants indicated that they could use all of the same gear (line, hauler, anchors) that they normally would use while longlining and simply "snap on" this style of pot. This is a much smaller initial investment in gear than what has historically been needed to convert a vessel to pot fishing. Slinky pots are collapsible and reduce the amount of space on deck required to store

pots (Figure 4-5). These types of pots sell for roughly \$100-\$150.¹³ NPFMC 2021 also described how the lightweight nature of these pots (< 10lbs) could potentially reduce the severity of gear conflict and entanglements, which relate to Elements 5 and 6 in Section 4.7.5. (Figure 4-6) shows a diagram of a slinky pot and its components, which will be referred to throughout the document.



Figure 4-4 Slinky pots of several different sizes.
Source: Fish Tech Inc., social media, June 2020.



Figure 4-5 Comparison of space required on deck for 60 large, stackable black cod pots (left) and 650 collapsible pots (right). Source: Fish Tech Inc., social media, June 2020.

¹³ <http://www.alaskafishradio.com/lightweight-collapsible-codcoil-black-cod-pots-can-barely-keep-up-with-demand/>

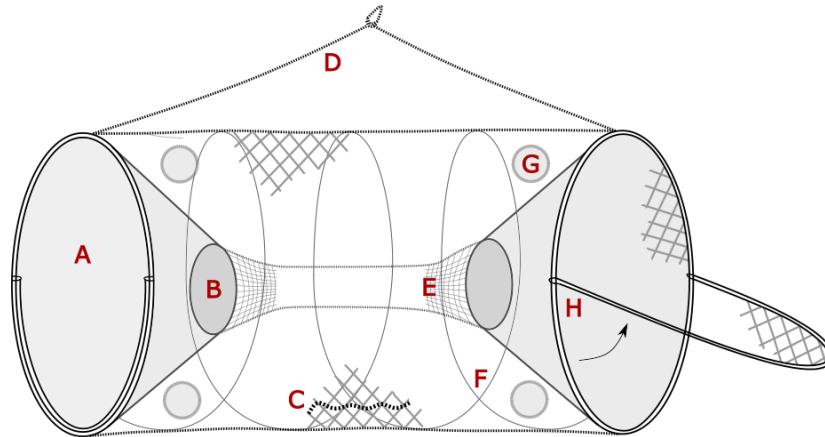


Figure 4-6 Diagram of a slinky pot and components. Courtesy of Jane Sullivan, AFSC.

A = pot end (composed of closed helical spring). B = tunnel opening / tunnel entrance (rigid/hard = stainless steel welded rings or rigid plastic, flexible/soft = pliable stainless steel chord coated with soft plastic, which allows the tunnel opening to elongate in one direction for halibut). C = bio twine/escape panel (aka “rotten cotton”). D = bridle. E = fine mesh tunnel entrance (aka “sock tunnel”). F = slinky/spring coil, which serves as the frame of the pot and also allows it to collapse. G = escape ring (note that there are four escape rings in this diagram). H = door hinge (note that there are doors on both pot ends).

4.5.3. CQE Program

This section highlights a brief history and the goals of the CQE Program, as well as the management measures most directly related to this action. For a comprehensive overview and more extensive data on the CQE Program, see the “Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program” (NPFMC, 2010).

The CQE Program was approved by the Council in 2002 and implemented by NMFS in 2004 under GOA Amendment 66 to the GOA FMP ([69 FR 23681, April 30, 2004](#)). This amendment revised the IFQ Program to allow a distinct set of remote, coastal communities with few economic alternatives to purchase and hold catcher vessel QS in Areas 2C, 3A, and 3B in order to help facilitate access to and sustain participation in the commercial halibut and sablefish fisheries. Eligibility to participate in the Program was limited to communities with fewer than 1,500 people, documented historical participation in the IFQ fisheries, direct access to saltwater on the Gulf of Alaska, and no road access to a larger community. Eligible communities can form non-profit corporations (CQEs) to purchase catcher vessel QS. The annual IFQ resulting from the QS can be transferred to eligible community residents.¹⁴

In the final motion establishing the CQE Program, the Council established three performance standards that, although not required by regulation, were intended to be seen as goals of the program with voluntary compliance monitored through the annual reporting mechanisms and evaluated when the program is reviewed. These are:

1. *Maximize benefit from use of community IFQ for crew members that are community residents.*
2. *Ensure that benefits are equitably distributed throughout the community.*

¹⁴ NMFS requires that criteria are developed for the equitable distribution of quota, but not that each community follow specified criteria. Some communities have employed a ‘point system’, while others have developed other types of rating criteria to distribute quota

3. *Ensure that QS/IFQ allocated to an eligible community entity would not be held and unfished.*

The CQE Program was intended to promote ownership by individual residents in coastal communities, as individuals have the opportunity to lease annual IFQ from the CQE and gradually become financially able to purchase their own QS. CQE-held QS must remain with the CQE unless it is sold in order to improve, sustain or expand the opportunities for community residents to participate in the IFQ fisheries or to meet legal requirements (50 CFR 679.41(g)),¹⁵ creating a permanent asset to be used for the benefit of the community and its residents. An eligible community resident (50 CFR 679.2), for the purposes of the IFQ Program, is a citizen of the United States and maintained a domicile in a rural community (the CQE community) for 12 consecutive months immediately preceding the time when the assertion or residency is made. It is important to note that the criteria for residency in the existing CQE Program do not appear to require that a person must have ‘lived continuously’ in the community for 12 months; rather, residency is based on having the principal home in the community, and the intent to return to that home (NPFMC, 2010). Both community- and individually-held QS are important in achieving the Council’s objectives for the IFQ Program in terms of fishing access and socioeconomic wellbeing.

In 2014, BSAI Amendment 102 expanded the Program to also include one community in Area 4B, Adak. During development of this amendment, the Council considered comments from the public, NMFS, and the State of Alaska, and incorporated the foundation of the GOA CQE program in its recommendation for the Aleutian Islands CQE Program. As noted earlier, the GOA CQE Program was developed to provide harvest opportunities for small, remote, coastal communities that lacked access to fishery resources; the Aleutian Islands CQE Program was intended to meet that same purpose.

As of 2021, there are 46 CQE-eligible communities across the GOA and Aleutian Islands.¹⁶ Adak is the only eligible CQE community in Area 4B. CQE participation has been limited, mainly because most CQEs have had difficulty financing the purchase of QS (NPFMC 2010). Only five CQEs have purchased QS.¹⁷ However, 30 of the 46 eligible GOA communities have completed the process to form a CQE and have it approved by NMFS.

4.5.4. Adak Community Quota Entity

The CQE representing the Community of Adak, AK is the Adak Community Development Corporation (ACDC).¹⁸ ACDC is the non-profit entity authorized to purchase and hold class B and C share QS for Adak to be transferred to residents. Table 4-3 displays the QS units and equivalent IFQ pounds held by ACDC.

In February 2010, ACDC presented the proposal to the Council to develop a CQE Program in Area 4B. In the original proposal, ACDC did not include the requirement that CQE-held QS can only be leased to individuals who have been residents of the community for the previous 12 months - a significant departure from the GOA CQE Program. The ACDC proposal instead included a requirement that halibut and sablefish resulting from CQE-held QS be delivered ‘in the region.’ ACDC noted that the community would benefit from both residents fishing the CQE-held QS and product delivered to the plant located in

¹⁵ [50 CFR 679.41\(g\)](#): A CQE may transfer QS: (i) To generate revenues to provide funds to meet administrative costs for managing the community QS holdings; (ii) To generate revenue to improve the ability of residents within the community to participate in the halibut and sablefish IFQ fisheries; (iii) To generate revenue to purchase QS to yield IFQ for use by community residents; (iv) To dissolve the CQE; or (v) As a result of a court order, operation of law, or as part of a security agreement. If the CQE sells its QS for any other reason, NMFS will withhold annual IFQ permits on any remaining QS held and will disqualify the CQE from holding QS on behalf of that community for three years. It also requires that the CQE divest itself of any remaining QS on behalf of that community.

¹⁶ [See Table 21 in 50 CFR 679.](#)

¹⁷ Adak (4B), Hoonah (2C), Perryville (3B), Old Harbor (3A), and Ouzinkie (3A) are the five CQE communities that have purchased QS as of August 2021.

¹⁸ ACDC is a nonprofit corporation organized exclusively for charitable, scientific, and/or educational purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code.

Adak, however ACDC also wanted the flexibility to lease QS to non-residents should resident fishermen not be available. The proposal also noted that allowing Adak to become a CQE would allow both residents and non-residents who participate in the BSAI small boat Pacific cod fishery and deliver to Adak to lease halibut and sablefish IFQ, which could address halibut bycatch issues in that fishery.

During discussion at the December 2010 meeting, the Council concluded that the 12-month residency requirement is a fundamental element of the CQE Program to keep residents tied to the community. The definition of resident – an individual that has maintained a domicile in a rural community for 12 consecutive months immediately preceding the time when the assertion or residency is made – does not necessarily mean that the individual must have been physically located in that community for 12 months, which provides additional flexibility to individuals wishing to lease CQE held QS. In their final motion in February 2012, the Council included in the preferred alternative that the Area 4B CQE must adhere to the residency requirement **but included a 5-year exemption period with an effective date of March 17, 2014, ending March 17 2019 (79 FR 8870, February 14, 2014). After the 5-year period, the CQE is required to lease the annual IFQ derived from QS it holds only to an eligible community resident of Adak.**¹⁹

This additional flexibility was allowed because a limited number of harvesters that have landed catch in Adak in the past were Adak residents. The intent of the residency requirement is to tie the potential long-term benefits of QS held by an Aleutian Island CQE to the residents of Adak, however, the additional flexibility was allowed because the number of Adak residents that had landed catch in Adak in the past was minimal, and it provided time for the establishment of the CQE to attract individuals back to the community.

During the five years preceding Amendment 102, ACDC prioritized the leasing of community held quota to residents through their quota distribution criteria (described further in paragraphs below). The flexibility to lease to non-residents had been provided with the rationale that over the five years, the Adak CQE would attract individuals to establish residency in the community in order to become eligible to lease QS. However, Adak has continued to experience a decline in population (Table 4-9), and therefore eligible community residents. According to CQE annual reports, a large amount of the CQE QS held by ACDC went unleased and/or unharvested in 2019 and 2020 (ACDC 2019; ACDC 2020), and the closure of the processing plant in Adak has further hampered the community's ability to develop a healthy fishing economy.

History of Adak

Adak is located on Kuluk Bay on Adak Island in the Aleutian chain. It is the southernmost community in Alaska. It lies 350 miles west of Unalaska in the Aleutian Island chain and is not a CDQ community. The Aleut peoples have a long history on and around Adak and other communities in the Aleutian Islands prior to World War II. Adak had a significant role during World War II as a U.S. military operations base, and army installations on the island allowed U.S. forces to mount a successful offensive against the Japanese-held islands of Kiska and Attu.²⁰ After World War II, Adak was developed as a Naval Air Station, playing an important role during the Cold War as a submarine surveillance center. The station officially closed on March 31, 1997, and the Aleut Corporation acquired a significant portion of Adak Island, along with the naval facilities, under the BRAC (base realignment and closure) and other Federal

¹⁹ 50 CFR 679.41(g)(6)(ii) In the Aleutian Islands subarea may be used by any person who has received an approved Application for Eligibility as described in paragraph (d) of this section prior to March 17, 2019 and only by an eligible community resident of Adak, AK, after March 17, 2019.

²⁰ Alaska DCCED, Community Database Community Information Summaries, 2010. <http://www.commerce.state.ak.us/dca/commdb/CIS.cfm>

land transfer processes. This was a complicated and multi-step process that resulted ultimately in a land exchange between the Aleut Corporation and the USFWS. A significant portion of land on the southeastern edge of the former military-controlled land was retained as Federal land, due to its high wildlife value and location (connection to other USFWS-owned land).

ACDC Investment in Adak

Since the military station closed, both the Aleut Corporation and ACDC have invested significant effort into developing Adak as a commercial center and civilian community with a private sector economy focused heavily on commercial fishing (NPFMC 2014). Pursuant to its status as a 504(c)(4) non-profit, funds collected by ACDC must be *dedicated to the promotion and development of fisheries related resources, infrastructure, and assets for the benefits of the community of Adak, Alaska* (ibid.). Adak has pursued a broad range of fisheries for a resident fleet to be able to deliver to the shoreside processor located in Adak. The Aleut Corporation and its subsidiaries own much of the infrastructure in the community, including the building that houses seafood processing operations, and are otherwise directly involved in fishery issues as the recipient of a directed fishery allocation of AI pollock to support the economic development of the community of Adak. There have been ongoing rumors for the last few years that the military may return to Adak and in March of 2021, Thomas Mack (president and CEO of the Aleut Corporation) and U.S. Senator Dan Sullivan stated once again that the Navy could be considering reopening the base as a part of its new Arctic strategy.²¹

Through Congressional action, Adak currently receives an exclusive community allocation of 10% of the Western AI golden king crab TAC, which is allocated to ACDC. In addition, fifty percent of the class A golden king crab IFQ (i.e. IFQ that must be delivered to a processor with matching IPQ) for the Western Aleutian Islands fishery must be delivered to a shorebased or stationary floating crab processor west of 174 degrees west. Only two communities, Adak and Atka, are located within this geographic area. To address the lack of processing capacity that occurred due to changes in plant ownership and financial difficulties (Section 4.5.4.2), an emergency action created an exemption to the regional landing requirement allowing for landings from the 2009-2010 and 2010-2011 season to be landed outside of the western region. In 2011, Crab FMP Amendment 37 allowed future exemptions to the regional landing requirement, but only with the consent of both the communities of Adak and Atka ([76 FR 35781](#), June 20, 2011). Finally, Adak also receives an allocation of the AI pollock fishery, which is allocated directly to the Aleut Corporation.

²¹ <https://www.webcenterfairbanks.com/2021/03/16/sullivan-navy-considering-reopening-base-in-adak/>

Table 4-3 Halibut and Sablefish QS and IFQ held by ACDC 2014 through 2021

Year	Halibut		Sablefish		# vessels
	QS held (units)	IFQ Held (pounds)	QS held (units)	IFQ Held (pounds)	
2014	615956	60502	102230	7665	3
2015	615956	60502	102230	7630	3
2016	678609	66656	102230	6592	3
2017	678609	66656	221544	15922	3
2018	678609	61395	720570	59349	3
2019	1196304	124723	720570	59946	2
2020	1196304	113384	720570	60841	3
2021	1196304	126784	720570	140786	

Source: NMFS Restricted Access Management (RAM) division IFQ landings database sourced through AKFIN.

Note: Number of vessels indicates vessels that harvested CQE-held IFQ.

During the first five years of the program when the exemption of the residency requirement was in place, ACDC prioritized residents when distributing quota through a point system. Points were allocated to individuals if they were residents of Adak,²² owned, operated, or crewed on a local vessel, hired crew who qualified as residents, made landings in the directed state cod fishery within the last 12 months, and/or were Adak resident applicants who did not currently possess IFQ for the AI Area (ACDC, 2011).

After 2018, Adak did away with the point system but has since implemented a process to ensure equitable and fair distribution to crewmembers and vessels. Once the Net Quota for Distribution is determined after committed obligations or legal deductions are made and the number of eligible applicants for the program is established, the Net Quota for Distribution is split between a Vessel Pool and Crewmembers Pool. The Vessel Pool is set at no less than 50% and no more than 80% of the Net Quota for Distribution amount and the Crewmembers Pool is set at no less than 20% and no more than 50%. Percentages are set on an annual basis. The Vessels Pool quota is made available to the vessels pool on a stacked allocation basis: (1) all applicants are allocated an amount based on the lowest request or common denominator of all eligible pool applicants and then (2) the remaining applicants are allocated an amount based on the lowest common denominator of the remaining eligible pool applicants in a round-robin fashion until the pool is fully distributed. The Crewmembers Pool quota is divided equally amongst eligible applicants (ACDC, 2021).

4.5.4.1. Adak Quota Recipients and Harvesting Vessels

During first five years of the program, priority was still given to individuals who could prove residency (Section 4.5.4). Table 4-4 shows the place of residency for individuals who have received halibut and/or sablefish quota from the CQE. Over the seven years of the program, one individual resident has leased quota for six years and another individual for four. Seven residents have only leased quota for one year. For all but the first year, residents of Adak were the recipients of more than half of the halibut quota and all of the sablefish quota leased (Table 4-5; Table 4-6). The non-residents who leased quota were a combination of captains and crewmen who had previously delivered to the Adak processing plant.²³

One of the goals of the CQE is to provide individuals with a means to become financial able to purchase their own quota. ACDC has established a local resident crew royalty where 5% of the ex-vessel price from the lease fee is made available to the individual for the purchase of individual QS (ACDC, 2021).

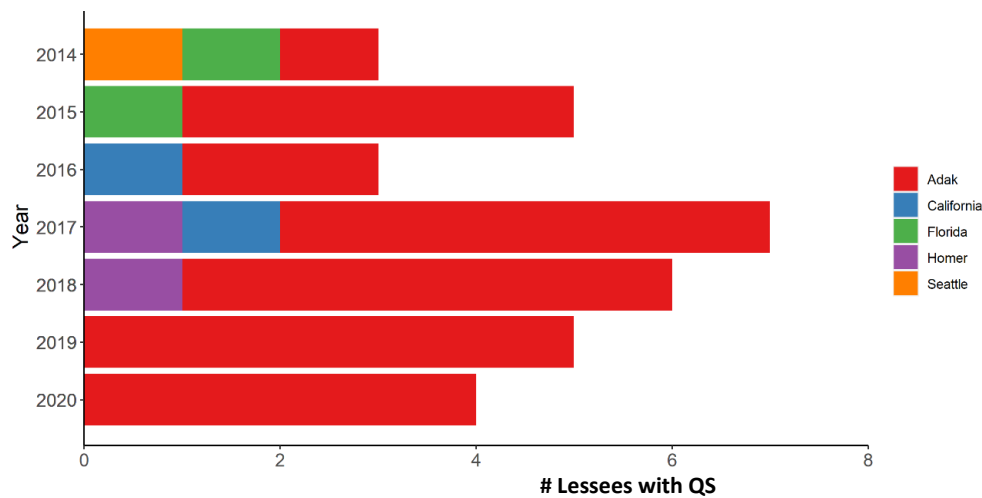
²² During the interim period, a *resident* was defined as someone who resided in Adak for three consecutive months. Since the end of the residency exemption period, Adak has implemented the 12-month residency requirement when leasing quota.

²³ Nelson, personal correspondence 6/17/2021.

However, no recipients of Adak who have leased from the CQE have purchased QS at the time of analysis.

Adak has historically pursued a broad range of fisheries for a resident fleet to be able to deliver to Adak Fisheries, the shoreside processor that had been located on Adak. The development of a local residential fleet has been a goal of the local leadership, but currently the locally-owned catcher vessel fleet is small. From 2016-2019, three vessels fished CQE-held IFQ, one of which was had an owner address in Adak.²⁴In addition, the fleet is limited in their fishing opportunities in the AI subarea, due to the size and range of the vessels. As a relatively new civilian community with no historical local fleet, Adak does not have a large established residential fishing fleet. Local vessels, including small vessels, are desired by the community for a number of reasons. Larger vessels from outside the community tend to be self-supplied and may work the area without coming into the community. Small, locally based vessels, on the other hand, buy local groceries, utilize local goods and services, have crew who live in the community, and otherwise are seen as generally contributing to a developing local economy. Table 4-7 shows the vessel homeports for vessels that have harvested Adak-CQE derived IFQ. During the first five years of the program when the exemption to the residency requirement was in place, priority was given to applicants who owned, operated, or crewed on a local vessel with fixed-gear capabilities. One Adak-based vessel has participated every year since 2015, and another Adak-based vessel participated in five out of seven years (2015-2019).

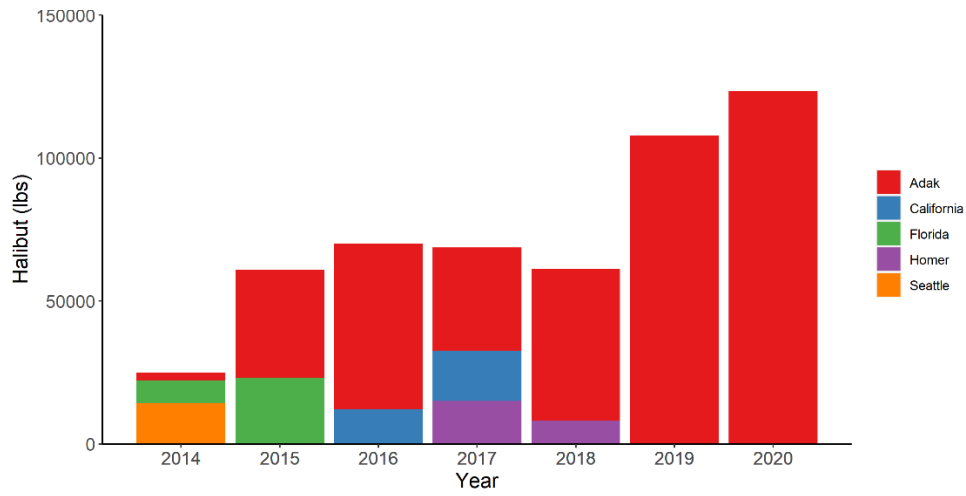
Table 4-4 Lessee Place of Residency



Source: ACDC CQE Annual Reports 2014-2020; Adak-Quota-Recipients.xlsx

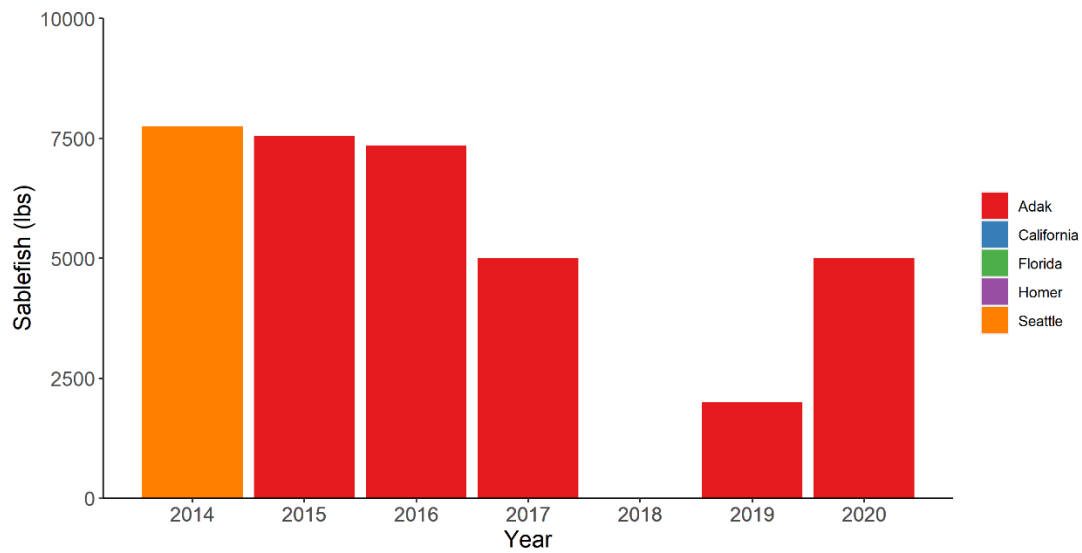
²⁴ ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive FT

Table 4-5 Halibut IFQ Leased by Place of Residency



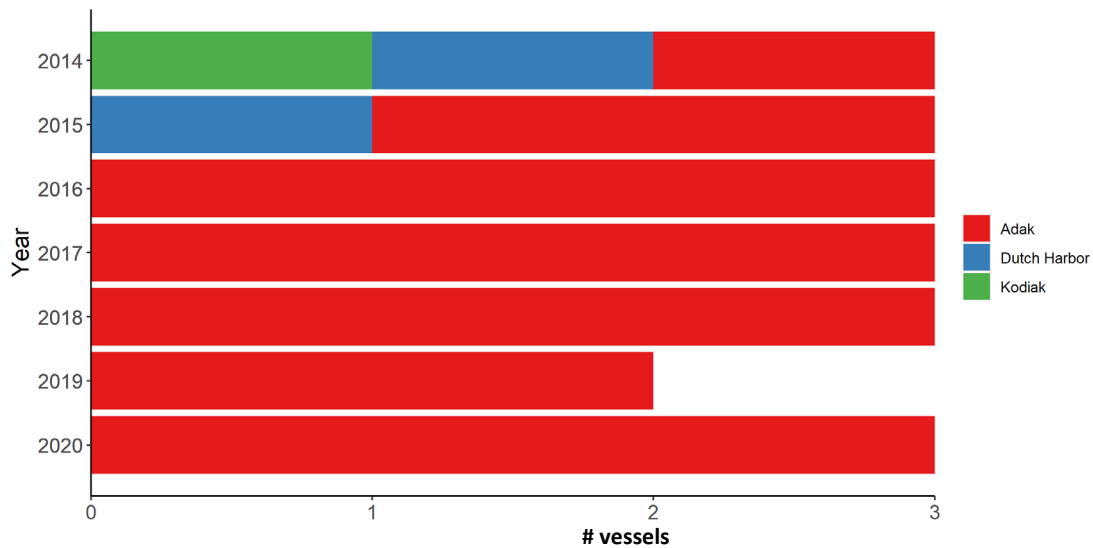
Source: ACDC CQE Annual Reports 2014-2020; Adak-Quota-Recipients.xlsx

Table 4-6 Sablefish IFQ Leased by Place of Residency



Source: ACDC CQE Annual Reports 2014-2020; Adak-Quota-Recipients.xlsx

Table 4-7 Harvesting Vessel Homeports



Source: ACDC CQE Annual Reports 2014-2020; Adak-IFQ-VesselData.xlsx

4.5.4.2. Adak Processors

The shorebased processor in Adak has struggled with maintaining stable operations and ownership. It was closed in 2010 and 2020 and had conducted only a small amount of processing in 2011. In the years when the processor was open, most commercial fishing deliveries to Adak were from larger vessels from outside the area. Of the species processed, Pacific cod, halibut, and sablefish were the primary species. The community also saw some crab and Pacific cod processing related to other companies, but these companies are not physically located in the community. From 2003 to 2009, the Adak processing plant was most active from January through March followed by a relatively quiet period from April through June, and then running about half-speed from July through September before activity tapering off from October into November. The A-season Pacific cod fishery was the main source of income for the plant (and raw fish tax revenue for the City of Adak), accounting for about 75% of the plant revenue. The plant has the capability to process one million round pounds (454 mt.) of Pacific cod daily.

One of the difficulties of the Adak shoreplant has been the numerous ownership changes since its establishment in 1999 as Adak Seafoods (NMFS 2014b). The physical structures that have housed shore-based processing operations in Adak in the post-military installation era are owned by the Aleut Corporation and/or its subsidiaries. In mid-July 2000, Norquest became a predominant partner. In January 2002, Icicle Seafoods became a relatively equal partner in the operation, which operated as Adak Fisheries, LLC. Other ownership changes ensued, although until recently, the company still operated as Adak Fisheries, LLC. In 2009, the price of Pacific cod dropped to less than half of the 2008 price. As a result, Adak Fisheries, LLC. struggled to meet its financial obligations, and in the end, filed for Chapter 11 bankruptcy in September 2009. During 2010 and 2011 fishing years, financial difficulties surrounding the Adak shoreplant resulted in no processing of Pacific cod. In 2012, the shoreplant was once again open for business operated by Icicle Seafoods Inc., processing a large portion of Area 541/542 Pacific cod. In April 2013, Icicle Seafoods closed its operation in Adak citing concerns about the health of the region’s Pacific cod resource and increased regulatory uncertainty surrounding AI Pacific cod. In June 2013, the City of Adak was the highest bidder in an auction for the processing equipment formerly owned by Adak Seafood, LLC. The intent of the purchase by the city was to keep the processing equipment in place as a turnkey operation in order to facilitate the expedited reopening of the plant. The processing facility was operated in 2014 by Adak Cod Cooperative LLC and from 2018-2019 by Golden Harvest Alaska

Seafoods LLC.²⁵ Currently, Aleut Corp., owns the fish processing plant in Adak through Peter Pan Seafood Co.

At the time of the analysis, the Council had selected a preliminary preferred alternative (PPA) on the BSAI Pacific cod trawl CV cooperative program.²⁶ This alternative, with the selection of Option 6.1, would require the cooperative(s) to reserve a set-aside for delivery to an Aleutian Islands shoreplant in any year when the community of Adak and/or Atka files a notice of intent to process. The amount of the set-aside will be 10% of the BSAI CV trawl directed A season harvest amount and is in effect only during the A-season. In response to this PPA, Peter Pan Seafoods announced that they are suspending their attempts to reopen the plant.

There is only one other shoreplant in the AI management area, located in Atka. Of these two plants, Adak is the primary plant for Pacific cod. Since 2008, except for 2018 and 2019, AI fishing communities, and specifically the community of Adak and its shoreplant, have seen a decrease in the amount of Pacific cod being delivered to their plant from the federal component of the fishery. The amount of Pacific cod delivered to AI shoreplants has been highly variable, which is not conducive to stable shoreside operations. Several factors have contributed to this instability, include decreased Pacific cod biomass in the AI subarea; the establishment of separate OFLs, ABCs, and TACs for Pacific cod in the BS and the AI; changing Steller sea lion protection measures; and changing fishing practices in part resulting from rationalization programs that allocate catch to specific fishery participants (NPFMC 2021b).

4.5.4.3. Adak Community and Employment Information

Adak is a relatively diverse community with a shore-based processor and is still transitioning from its days as a relatively large military base in the 1990s to a small civilian Alaskan community. In the years immediately following the departure of the military there was still military-affiliated businesses and industries located in Adak but over time these have gradually all left the community as services became no longer needed (NPFMC 2020b). Since becoming the site of shore-based processing operations, Adak has historically had a substantial proportion of its population living in group quarters, and the percentage of minority residents has been much higher than the percentage of Alaska Native residents alone (Table 4-8). One specific demographic challenge faced by Adak has been retaining a large enough number of families with children to qualify for state funding of a school in the community (which requires a minimum of 10 students). The loss of any families with school age children from the community raises concerns about the ability to keep the school open which, were they to close, would make retention of other families with school age children in the community more difficult. Following the closure of the Adak processing plant in 2020, a family with four school age children left the community,²⁷ moving the number of potential school enrollees closer to the minimum required for state funding.

²⁵ In June 2020, Golden Harvest Alaska Seafoods LLC stopped purchasing fish and sent employees home.

²⁶ June 2021 Council motion at <https://meetings.npfmc.org/CommentReview/DownloadFile?p=73227733-ff8f-4d8c-9d77-4a0360420541.pdf&fileName=C4%20Council%20Motion.pdf>

²⁷ personal communication, S. Minor, 8/6/2020

Table 4-8 Adak Community Census Data

Community	2010 Decennial Census Data				2019 American Community Survey Data				
	Total Population	Alaska Native/ Native American Residents (percent of total population)	Minority* Residents (percent of total population)	Residents Living in Group Quarters** (percent of total population)	Per Capita Income (dollars)	Median Household Income (dollars)	Number of Family Households	Median Family Income (dollars)	Low-Income*** Residents (percent of total population)
Adak	326	5.5%	81.9%	66.6%	\$35,193	\$70,000	25	\$68,750	16.4%
State of Alaska	626,932	14.1%	37.1%	1.8%	\$36,787	\$77,640	166,325	\$92,588	10.7%

*Defined as all persons other than those self-identified being in both “white” and “non-Hispanic” census categories.

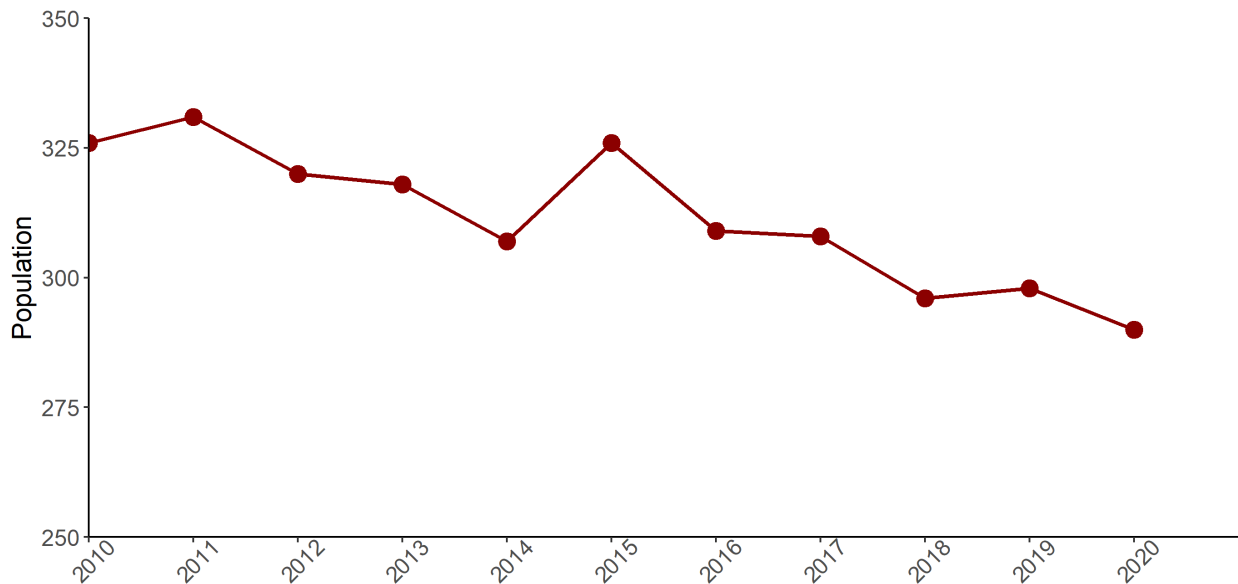
**Defined as “other non-institutional facilities,” which excludes institutionalized populations, college/university student house, and military quarters.

***Defined as those persons living below the poverty threshold by the U.S. Census Bureau in the 2014-2018 American Community Survey. As a point of reference, a family of four (two adults and two children) had a poverty threshold of \$25,926 in 2019.

Source: US Census 2010; US Census 2020

Table 4-9 shows the population estimates for Adak from 2010-2020. There has been a declining trend in the population since 2011, which coincides with the closure of the processing plant in 2010 and 2011.

Table 4-9 Adak Population



Source: AK-Populations.xlsx downloaded from <https://live.laborstats.alaska.gov/pop/index.cfm> June 6, 2021

The community of Adak has acted as a port of embarkation and disembarkation for CPs and CVs, immediately before and immediately after trips targeting Pacific cod in the AI subarea, as well as AI Atka mackerel and/or AI pollock. As a port of embarkation and disembarkation, Adak receives a substantial amount of economic activity involving a range of goods and services present in the small community. In general, vessels during a port call could conduct crew transfers, purchase provisions and fuel, offload product, and purchase other local goods and services. Money spent on goods and services by vessels making port calls does circulate in the small economy of Adak. It is expected that in years when the processor is closed, less economic activity occurs as a result of fewer port calls.

Comprehensive data on employment in a small coastal community such as Adak is difficult to collect and report on. The most recent census data indicate that the top five occupations in Adak are: transportation and warehousing, construction, public administration, manufacturing, and retail trade.²⁸ It is likely that many residents work multiple part-time jobs. While data are limited, it is expected that with no other shore-based processor in the community, Pacific cod processing activity at the Adak shoreplant likely accounts for a large proportion of local employment in Adak.

4.5.4.4. ACDC Payments and Adak Fishery-Derived Tax Revenue

Individuals who lease IFQ derived for ACDC held QS must pay a royalty based on a percent of the ex-vessel sale of fish delivered against the CQE IFQ. The royalty payment is calculated on the ex-vessel price net of taxes. The royalty rate is set by the ACDC Board of Directors on an annual basis (2020 ACDC Application). Figure 4-7 shows the payments made to the CQE for use of IFQ. Sablefish payments were only made by residents from 2015-2020, and only by a single non-resident in 2014. Non-resident halibut payments comprised of a substantial amount of the payments made to ACDC in three of the five years when the residency exemption was in place. Halibut and sablefish payments made in 2019 and 2020 were dramatically lower than in the previous five years, even though the lease rates were not. This is due to several individuals who leased quota not going fishing due to difficulty finding a vessel and the impacts of the COVID-19 pandemic.²⁹

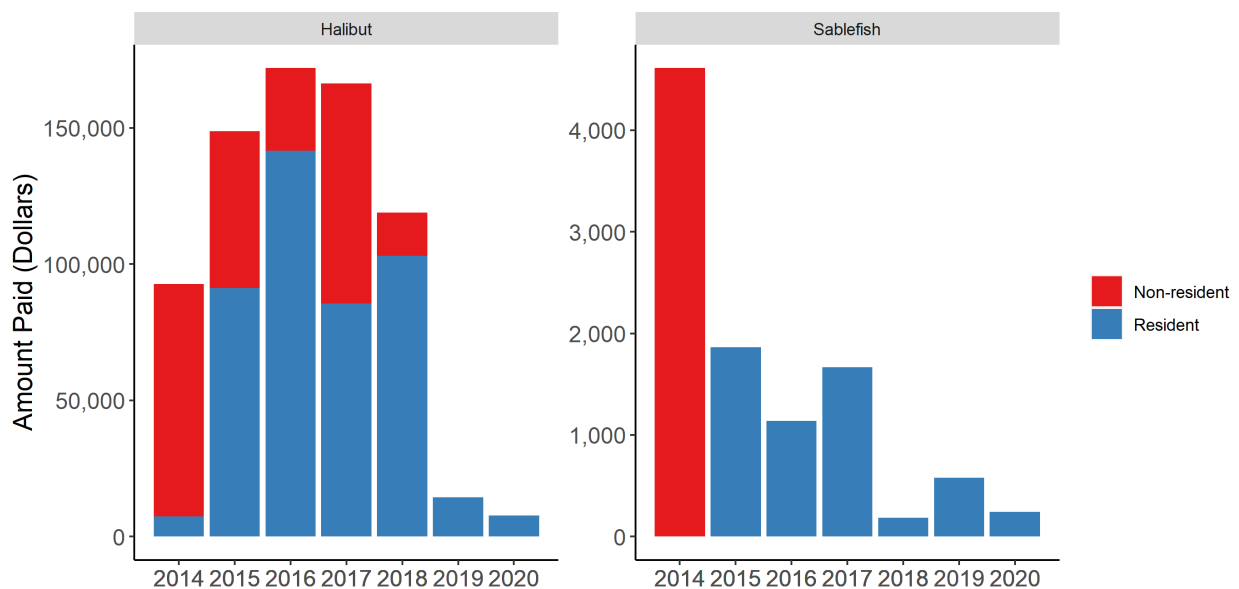


Figure 4-7 Payments made to ACDC

Source: ACDC CQE Annual Reports 2014-2020; ACDC_IFQ_Payments.xlsx

²⁸ In the civilian employed population 16 and over. Source: [2020 Census Data](#)

²⁹ Personal communication,

Table 4-10 City of Adak selected fisheries-related general fund revenues, fiscal years 2010-2019.

Fiscal Year	Revenue (dollars) by Direct Fishery Revenue Source						Direct Fishery Revenue Source Total	All General Fund Revenue	Direct Fishery Revenue Source Total as a Percent of All General Fund Revenue
	Direct Fishery Revenue Source								
	City Raw Seafood Tax	State Fisheries Business Tax from DOR	State Fisheries Resource Landing Tax from DOR	State Fisheries Business Tax from DCCED	State Fisheries Resource Landing Tax from DCCED	Direct Fishery Revenue Source Total			
FY 2010	na	\$311,439	\$97,736	\$308,178	\$0	\$717,353	\$1,464,483	49.0%	
FY 2011	na	\$13,567	\$54,949	\$98,973	\$92,919	\$260,408	\$1,015,485	25.6%	
FY 2012	na	\$143,848	\$40,219	\$122,743	\$165,964	\$472,774	\$1,916,341	24.7%	
FY 2013	\$108,094	\$75,469	\$61,035	\$145,816	\$115,360	\$505,774	\$1,507,930	33.5%	
FY 2014	\$140,193	\$168,370	\$86,452	\$139,135	\$111,999	\$646,149	\$1,410,574	45.8%	
FY 2015	\$65,349	\$122,489	\$54,660	\$108,405	\$40,443	\$391,346	\$1,310,497	29.9%	
FY 2016	\$76,313	\$67,968	\$1,883	\$110,149	\$14,351	\$270,465	\$1,084,898	24.9%	
FY 2017	\$108,602	\$44,636	\$103,209	\$82,413	\$158,858	\$497,718	\$1,208,202	41.2%	
FY 2018	\$290,839	\$34,908	\$74,247	\$121,121	\$79,832	\$600,947	\$1,549,197	38.8%	
FY 2019	\$330,883	\$34,131	\$161,256	\$73,844	\$121,952	\$722,066	\$1,478,153	48.8%	

Source: City of Adak, Alaska. Annual Consolidated Financial Statements Fiscal Years 2010-2019. <http://www.commerce.alaska.gov/dcra/dcrepoext/Pages/FinancialDocumentsLibrary.aspx>

Table 4-10 provides information on City of Adak tax revenues deriving from direct fishery revenue sources (the city raw seafood tax, the state shared fisheries business tax, and the state shared fisheries resource landing tax) compared to all general fund revenues received by the city for fiscal years 2010-2019. As shown, for the City of Adak, between roughly 25 percent and 49 percent of all general fund revenues in any given year derive from direct fishery revenue sources.

4.5.4.5. IFQ Regulatory Exceptions for Adak

The Council has recommended and NMFS has implemented numerous regulatory exemptions or exception applicable to the participation of the community of Adak, AK in the federally managed fisheries off Alaska. This section summarizes the regulatory exceptions under the IFQ Program that are applicable to the CQE representing the community of Adak, AK.

TEC exemption: Regulations at 50 CFR 679.41(d)(6) specifically exempt residents of Adak, Alaska from the requirement to have 150 days of work experience as a crewmember in order to be eligible to receive IFQ by transfer.³⁰ This allows the CQE representing the community of Adak, AK to transfer IFQ to any eligible resident of the community regardless of their work experience as a crewmember.

Residency exemption: Until March 17, 2019, IFQ derived from QS held by a CQE on behalf of the community of Adak in the Aleutian Islands subarea could be used by any person who has received an approved Application for Eligibility as described in paragraph § 679.41(d) and only by an eligible community resident of Adak, AK, after March 17, 2019.³¹

Sablefish Use Cap: The CQE representing the community of Adak, AK may hold up to 4,789,874 units of sablefish QS. This is higher than the limit of 3,229,721 units of sablefish QS that may be held by any other CQE entity.³²

³⁰ 50 CFR 679.41(d)(6): [https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679#p-679.41\(d\)\(6\)](https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679#p-679.41(d)(6))

³¹ 50 CFR 679.41(g)(6)(i) and 679.42(e)(8)(ii) and 50 CFR 679.42(f)(7)(ii): [https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.41#p-679.41\(g\)\(6\)\(i\)](https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.41#p-679.41(g)(6)(i))

³² 50 CFR 679.42(e): [https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.42#p-679.42\(e\)](https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.42#p-679.42(e))

Halibut Use Cap: The CQE representing the community of Adak, AK may receive an amount of halibut QS up to 1,392,716 units of halibut QS.³³ No person other than a CQE representing the community of Adak, AK, individually or collectively, or an RQE, may use more than 495,044 units of halibut QS in IFQ Area 4B unless the amount in excess was received as an initial allocation of halibut QS.³⁴

Fish-up: IFQ derived from QS held by a CQE may be used to harvest IFQ species from a vessel of any length, with the exception of IFQ derived from QS in IFQ regulatory areas 3A and 4B that are assigned to vessel category D.³⁵ Class B or C IFQ held by a CQE in area 4B may be fished on a vessel of any size class. As of 2021, the CQE representing the community of Adak, AK does not hold any D class QS.

Halibut Vessel Limits: Vessel caps are specified for IFQ leased from a CQE: “No vessel may be used, during any fishing year, to harvest more than 50,000 lb (22.7 mt) of IFQ halibut derived from QS held by a CQE”.³⁶ In 2020, the Council recommended and NMFS implemented, emergency regulatory action to provide flexibility to IFQ program participants by removing the halibut vessel use caps in IFQ Areas 4B, 4C, and 4D (85 FR 41197, July 9, 2020) and made the a similar recommendation to remove the halibut vessel use caps in IFQ Areas 4A, 4B, 4C, and 4D in 2021 ([86 FR 19207](#)). CQEs are not allowed to hold halibut QS in areas 4A, 4C, 4D and 4E 50 CFR §679.42(f)(3) therefore ACDC is the only CQE that would be affected by this action if approved and implemented by NMFS.

4.6. Analysis of Impacts: Alternative 1, No Action

Under Alternative 1, no action, the IFQ fisheries in the BSAI and GOA would be required to operate as described in Section 2.1. A summary of the impacts under Alternative 1 is included below. As noted in the GOA Sablefish Pots Review, many of these impacts can only be described qualitatively as there is no systematic data collection on some of these issues. The following impacts were described in the IFQ Committee meeting in March 2021 or at the April 2021 AP or Council meeting. Many of these impacts are also further described under Alternative 2 in Section 4.7

Section 2.2 describes how wrapping the door closure of a pot with untreated cotton thread does not meet the regulatory definition of a biodegradable panel for any type of pot. Many, if not all, of the pots currently manufactured (slinky pots) to fish for sablefish are not designed in this way. The burden of time and monetary costs of cutting the mesh and sewing in a panel to meet regulations falls on those who use the gear. While these costs are relatively minimal, incremental increases in cost can add up for a harvester with many pots. Furthermore, some of those familiar with the fishery have noted that cutting the mesh to sew in a “panel” with biodegradable twine may compromise the mesh and thus the ability of the pot to retain fish. This is due to the way that in these lighter weight pots, the load of fish is borne by the webbing (Figure 4-8). The weight of the haul ends up on whichever part of the mesh ends up on the ‘bottom’ of the pot. While the analysts do not have specific data on the breaking strength of mesh pots and biodegradable twine, those with a knowledge of the gear type have indicated that a pot’s entire catch of fish may be lost if even a few mesh links are severed.³⁷ Impacts of the different styles of biodegradable escape mechanisms are explained in further detail in Section 4.7.1 of the RIR and Section 5.2 of the EA.

³³ 50 CFR 679.42(f)(2): [https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.42#p-679.42\(f\)\(2\)](https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.42#p-679.42(f)(2))

³⁴ 50 CFR 679.42(f)(1): [https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.42#p-679.42\(f\)\(1\)](https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.42#p-679.42(f)(1))

³⁵ 50 CFR 679.42(a)(2)(ii): [https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.42#p-679.42\(f\)\(2\)\(ii\)](https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.42#p-679.42(f)(2)(ii))

³⁶ 50 CFR 679.42(h)(1)(ii): [https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.42#p-679.42\(h\)\(1\)\(ii\)](https://ecfr.federalregister.gov/current/title-50/chapter-VI/part-679/subpart-D/section-679.42#p-679.42(h)(1)(ii))

³⁷ personal communication, A. Stubbs, August 2021



Figure 4-8 Slinky pot with catch being hauled up.
Photo courtesy of Alexander Stubbs.

As compared to elements in Alternative 2, costs associated with Alternative 1, No Action, include:

- Additional buoys and flagpole required have a direct monetary cost and require more deck space. This is particularly challenging for smaller vessels that have already limited deck space.
- Those who would benefit from using jig gear (Section 4.7.3) to harvest sablefish IFQ would continue using other gear types to harvest their quota. Jig gear may be much more feasible for some fishermen with small amounts of IFQ or smaller vessels, and if it is not authorized, efficiency is not being maximized for those operations.
- Sablefish and halibut IFQ fishermen would have less flexibility to choose a tunnel opening size that suits the needs of their operations. This could lead to harvesters not optimizing CPUE, not being able to select for specific size fish, and potentially requiring more effort (ex: spending more time on the grounds and in turn increased monetary costs for crew, fuel, etc.) to harvest quota.
- Maintaining current pot limits and gear retrieval requirements may affect different groups of stakeholders in various ways.
 - Lower (status quo) pot limits and shorter gear retrieval times could help to limit gear conflict and grounds preemption issues, a benefit to HAL vessels. However, as described more in Section 4.7.5, these limits may have the indirect effect of actually *increasing* the amount of time pot vessels need on the grounds in order to harvest their IFQ, as doing so with less gear can increase the amount of time required. There are no quantitative data with which to analyze the validity of these effects.

- For vessels that are using conventional pots (not slinky pots), the gear retrieval requirements can cause greater stability issues and may slow down the vessel's ability to fish the gear most efficiently and leave the area once quota is obtained.

Adak Quota Recipients, Processors, and Community

Selecting the No Action Alternative would leave in place the regulatory requirement that IFQ derived from QS held by the Adak CQE could only be leased to individuals who have been a resident of Adak for the previous 12 months, meaning the individual has maintained a domicile in the community during this time. This does not necessarily mean that the individual must have been physically located in the community for 12 months. Note that Adak residents are exempt from the requirement that an individual must have 150 days of work experience as a crewmember to be eligible to receive IFQ by transfer, which increases the opportunities for new entrants into the fishery to lease from the CQE.

Under Alternative 1, there would be no change in eligible individuals who can lease from the CQE and, if population trends continue, the number of eligible residents will likely continue to decrease. The recent population of Adak is closely tied to whether the processor located in Adak is in operation or not. Prior to 1997, the population was largely comprised of military personnel. The population has been, in general, declining since 2010 (Figure 4-9).

Larger community benefits derived from a stable fishing industry in Adak are closely connected to the operational status of the processing plant in Adak or, more historically, the presence of the military. There has been recent discussion surrounding the potential return of a military presence to Adak, but at this time there is no indication of when this may occur and how big a presence it would be. Depending on how self-contained the military is, it may also serve to improve local infrastructure and offset costs. The reopening of the processing plant or return of a military presence would serve as a catalyst for civilian population resulting from increased air travel and demand for local services and could help to stabilize schools.

NMFS and the State have implemented numerous measures to revive the fishing economy in Adak. These include the allocation of 10% of the Western AI golden king crab TAC and allocation of the AI pollock fishery. However, despite these previous attempts it is unlikely that there will be an increase in residency numbers under Alternative 1 that will have any measurable positive impact on the community.

Alternative 1 may still offer employment opportunities to residents on non-resident boats, but this is most likely to occur if the processor resumes operations. For example, a non-resident on a HAL catcher vessel fishing in the AI State water Pacific cod fishery delivering to Adak could employ an Adak resident leasing halibut IFQ from the CQE as a crewmember, and use that IFQ onboard during the Pacific cod fishery. Absent IFQ onboard, participants are required to discard halibut caught incidentally in this fishery.

Alternative 1 would provide opportunities for new fishery entrants to gain experience, especially since residents are waived from the 150-day experience requirement. In the past, testimony by representatives of ACDC and others have conveyed that there is interest in having the Adak CQE lease the resulting IFQ to young residents graduating from high school in need of employment, residents that may not have 150 days of crew experience in a U.S. commercial fishery. Many young fishermen have extensive experience operating a vessel out of Adak, or experience in fishing halibut subsistence, but there are fewer commercial fisheries in which to gain crew experience in the western Aleutian Islands compared to the Gulf of Alaska. Many young residents of GOA communities gain experience through the GOA salmon or halibut fisheries. Testimony has indicated that young Adak residents have more limited opportunities, potentially in the Pacific cod or halibut fisheries, in part due to the much smaller number of resident fishermen on whose vessels one might be employed as crew. These opportunities would still be available

to some extent under Alternative 3, however, if ACDC were to continue to give priority to residents as it has in the past.

In the past two years, the fees collected by the ACDC have dramatically declined (Figure 4-7) which impacts the available funds the non-profit can utilize in the development of fisheries infrastructure in the community. The decline in collected fees is correlated to the overall decline in pounds of halibut and sablefish harvested. It is important to note that factors such as the Covid-19 pandemic may have also impacted harvest patterns.

4.7. Analysis of Impacts: Alternative 2

Expanding on the Approach to Analysis in Section 3, it is important to frame the scope of the potential change under this action. It is possible that some vessels that have not changed gear types may be encouraged to do so by the increased flexibility of the proposed action under Alternative 2- Elements 1, 2, 4, 5, and 6. However, the analysts do not anticipate that the flexibilities afforded by this action alone would be the driving motivation an IFQ holder to begin fishing with pots. It is expected that some portion of vessels will continue to use HAL gear into the foreseeable future, assuming the benefits of using that gear type outweigh costs due to any whale depredation or monetary costs of gear switching. In some areas, HAL fishermen have not experienced whale depredation to the same extent as in other areas of the GOA, and in these cases it may be expected that a higher portion of vessels continue to use HAL gear.³⁸ In contrast, some vessels may switch gear types regardless of the proposed action; those that were going to switch gear types regardless of any additional flexibilities due to this action. For these reasons, while more vessels may continue to switch from HAL to pot gear, an incremental and unknown, but likely minimal number of vessels may switch to pot gear as a direct result of this action.

Additionally, an unknown number of vessels may begin to use jig gear to harvest sablefish IFQ (Element 3). Smaller boats that cannot fish HAL or pots and have found electric reels and mechanical jigs to be effective for catching sablefish. Section 4.7.3 describes various scenarios in which IFQ holders who possess a small amount of sablefish IFQ may begin to use jig gear. The environmental impacts of an additional gear type for IFQ sablefish are analyzed in the EA.

4.7.1. Effects of Biodegradable Twine (Element 1)

Alternative 2, Element 1 proposes that regulations be revised to allow the use of biodegradable twine in the door latch or pot tunnel. With the development of new types of pots, fishery participants and gear manufacturers are working to address gear requirements while finding a design best suited for specific harvesting operations. Some types of pots, such as slinky pots, are designed with two doors so that one door can be tied shut and one can be used as a dump door (a door that is tied shut when deployed and opens to empty catch in the pot onto the vessel ('H' in Figure 4-5, and shown on the right in). The door that is tied shut is designed to have a biodegradable twine threaded around the door to keep the door shut (white twine shown in Figure 4-10, and 'A', in Figure 4-9) when fishing and allows it to break apart if the pot is lost, rather than cutting the mesh and sewing in a separate biodegradable thread (Figure 4-11, 'B' in Figure 4-9). This allows the weight of the catch to be distributed in such a way that it is not straining on a breakable biodegradable twine, as it would if the twine were sewn into the side of the mesh. Those involved in the fishery have indicated that cutting the mesh on the pot can cause more premature failures. If the cotton thread fails in the mesh, it can "zipper" along the pot, compromising the structure of the pot (personal communication, A. Stubbs, August 2021). If the cotton twine fails on the door, the pot is not

³⁸ Personal communication/public testimony, L. Behnken, 2021.

damaged. This design is used as an accepted biodegradable panel throughout other pot fisheries off of the West Coast and Canada.³⁹

Element 1 (allowing the use of ‘A’ in Figure 4-9 and white twine in Figure 4-10, further referred to as the “biodegradable latch”) would provide IFQ participants who use slinky pots the flexibility to choose a particular gear specification that is most effective for their operation. The additional benefit to those participants is that there would be no additional time or monetary burden to adjust their gear to comply current regulations- a minimal, but existing cost to those participants using slinky pots.

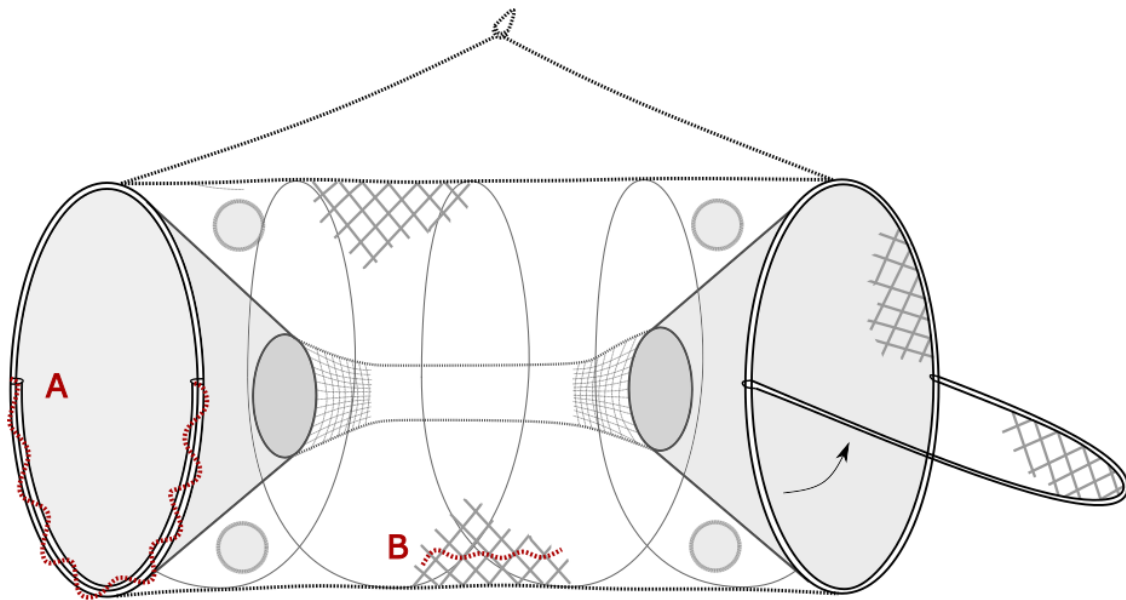


Figure 4-9 Slinky pot with biodegradable twine.

A = Proposed element 1. Cotton biodegradable twine (aka bio twine, rotten cotton) laced around the hinged door opening on the end cap. B = status quo: 18" bio twine "escape panel" cut into pot mesh.

³⁹ 50 CFR part 660.230(b)(4): Traps or pots must have biodegradable escape panels constructed with 21 or smaller untreated cotton twine in such a manner that an opening at least 8 inches (20.3 cm) in diameter results when the twine deteriorates.



Figure 4-10 Slinky pot with door wrapped closed with cotton twine (white thread on bottom of photo). Proposed in Element 1, currently not allowed by regulation.
Source: NMFS OLE, B. Cheeseman.



Figure 4-11 Slinky pot with biodegradable twine/panel tied into the mesh of the pot, allowed by status quo regulation.

4.7.2. Effects of Buoy Configuration and Flagpole Requirements (Element 2)

Alternative 2, Element 2 proposes that regulations be revised to remove the requirement in the GOA to have a cluster of four buoys and remove the flagpole requirement but retain the “LP” marking requirement. When implementing GOA Amendment 101, the Council recommended several gear specifications that were meant to distinguish pot longline gear from other fixed gear, when set on the fishing grounds. These specifications included four-buoy clusters, flagpoles, and radar reflectors. Buoys must be marked with information that identifies the vessel or the IFQ permit holder associated with that vessel. Four-buoy clusters and flagpoles were intended to reduce unintentional gear conflict in the GOA by enhancing the visibility of the gear-ends to other vessels that are physically present on the fishing grounds. Using multiple buoys should help keep the gear marker above the water line in stronger currents, the force of which might otherwise submerge a single buoy by dragging on the anchor line.

Radar reflectors are not defined beyond a general definition (performance standard), so as not to unintentionally impede the development of more effective, less costly, or more durable technologies. The analyst notes that several fishery participants, both through personal communications and public testimony, indicated that the common use of AIS (Automatic Identification System) in the fleet to mark the ends of longline pot strings has made radar reflectors obsolete.⁴⁰ Additionally, radar reflectors are an older technology that may be becoming more difficult to source. However, radar reflectors are on the USCG's checklist for at-sea boardings, and OLE has indicated that it is fairly common to see radar reflectors on the boats using sablefish pots in the CGOA.⁴¹ The use of AIS on fishing gear is not currently authorized by the Federal Communications Commission (FCC). Although NMFS is not able to recommend use of AIS, the Agency encourages the use of gear construction that enhances the safety as well as the reliable retrieval of gear. Gear enhancements that are beneficial to the IFQ fishing fleet should incorporate best practices and technology.

Gear is a major cost for fishermen, so elements that prevent conflicts or otherwise reduce the likelihood of gear loss are benefits that merit moderate additional expenditures. That said, extra gear costs accrue only to the harvester and erode his or her profitability margin. Additional costs may fall more heavily on operators with smaller gross revenues. In general, gear specifications that pertain only to the GOA sablefish IFQ pot fishery but are not applicable in other fisheries such as those where pots are used to harvest IFQ in the BSAI, are a cost burden to the harvesters who are directly regulated by this action.

When Amendment 101 was in development, the Council received testimony that these marking requirements would enhance the visibility of the ends of a longline pot gear set to other vessels that are on the fishing grounds and would not impose a substantial cost on vessel operators using longline pot gear. The testimony indicated that these marking tools are commonly used by vessel operators that deploy pot gear in fisheries in Alaska. Since then, further testimony and engagement in IFQ meetings and Council meetings have described that the additional gear increases demand on deck space; an issue particularly faced by small vessels attempting to switch to pot gear.

A more in-depth analysis of the impacts of Element 2 on participants using pot gear to harvest IFQ in the GOA, as well as on other vessels that fish in proximity to these vessels, would benefit from additional stakeholder engagement and testimony.

4.7.3. Effects of Authorizing Jig Gear for Sablefish (Element 3)

Alternative 2, Element 3 proposes that regulations be revised to authorize jig gear as a legal gear type for the harvest of sablefish IFQ in the BSAI and GOA. The 1993 Final Rule implementing the IFQ Program excluded jig gear from the definition of the sablefish fixed gear fishery (58 FR 59375, November 9, 1993), but included jig gear in the definition for halibut fixed gear. The allocation of sablefish for jig gear under Element 3 would come from the IFQ Program (fixed gears- HAL and pot).

Jig gear is a single, non-buoyed, non-anchored line with hooks attached (NPFMC 2012). The vertical lines are actively fished with baited hooks or surge tube jigs are attached. Vessels generally employ two to five jig machines per vessel. The mechanical jigging machines drop the jig weight to the bottom (or higher in the water column) and move the jigs up and down slightly to induce the fish to bite. Each jig machine may be adjusted to haul back when the right amount of tension is on the line (a set amount of fish). Machines haul up the fish, which are then removed one by one (Ibid.). Electric reels that are commonly used in sport fisheries are also used as jigs.

⁴⁰ Personal communication, L. Behnken, P. Clampitt, August 2021.

⁴¹ Personal communication, B. Pristas. September 2021.

The jig fishery, though relatively small, is a key fishery in the GOA, providing entry-level opportunity into area fisheries and contributes to a diversified fishing portfolio for combination fishing vessels throughout GOA coastal Alaskan communities. This is a relatively inexpensive fishery to start out commercial fishing in, and many vessels can use jig gear, as it is a gear type that does not require a lot of space or vessel retrofitting to use. Few vessels use jig gear in the BSAI,

Vessels that do not exceed 60 ft. length overall (LOA) and that are using jig gear (but no more than five jig machines, one line per machine, and 15 hooks per line in BSAI or 30 hooks per line in the GOA) are exempt from LLP requirements. Vessels that do not exceed 26 ft. LOA in the GOA and vessels that do not exceed 32 ft. LOA in the BSAI are also exempt from the LLP requirements. In the Bering Sea, an LLP is not required for catcher vessels <60' LOA using jig gear. Therefore, any vessel that fits these criteria that chooses to fish for sablefish IFQ using pot gear would also be exempt from these LLP requirements.

Between 2017 and 2021, 487 unique vessels used jig gear in the GOA and five unique vessels used jig gear in the BSAI. Much of the specific harvest data on the jig fishery is confidential due to the small number of vessels that participate in the fishery. Most jig vessels target Pacific cod and rockfish; therefore, the majority of catch by vessels using jig gear is Pacific cod, rockfish, pollock, and halibut.⁴² While most vessels that use jig gear are under 60 ft. LOA (Table 4-11), vessels of all sizes that use jig gear are in the zero-selection pool for the Observer Program, thus there are no data on non-groundfish catch for jig gear. Further discussion of management and enforcement concerns of authorizing jig gear for sablefish are included in Section 4.9.1.

Table 4-11 Number of vessels using jig gear by length.

Length overall (LOA)	Number of vessels				
	2017	2018	2019	2020	2021
<26	15	9	8	8	4
26-35	63	55	60	58	40
36-45	112	96	92	81	63
46-55	61	60	59	54	41
56-65	4	2	4	4	4
>66		1	1		
Grand Total	255	223	224	205	152

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA. Note: Data include vessels in BSAI and GOA areas, combined.

Table 4-12 shows the number of vessels that have used jig gear to harvest halibut IFQ (in pounds) over the past five years. All these vessels harvested IFQ in the GOA (Areas 2C, 3A, and 3B); no harvest of halibut IFQ with jig gear occurred in Area 4 during this time. It is uncertain whether those who intend to harvest sablefish IFQ with jig gear also hold halibut IFQs.

⁴² NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA

Table 4-12 Jig gear IFQ halibut landings (in lbs.) and number of vessels (2016-2021).

	# vessels	Area 2C	Area 3A	Area 3B	Total lbs
2016	11	296	3606	292	4194
2017	6	*	4186	*	4567
2018	4	269	853		1122
2019	6		5376	506	5882
2020	3		3617		3617

Source: NMFS Restricted Access Management (RAM) division sourced through AKFIN

Notes: Confidential data = *

There is little information on who may use jig gear to harvest sablefish IFQ as proposed under Alternative 2. Discussions with stakeholders indicated that in general, IFQ holders with vessels that are too small to fish with pots or HAL gear are expected to take advantage of this opportunity; but that there may be several scenarios in which someone may choose to harvest sablefish IFQ with jig gear (below).⁴³ Overall, it is expected that the number of people expected to use jig gear to harvest sablefish would be minimal. Further engagement and testimony could help indicate which kinds of operations would be most likely and guide future analysis.

- A salmon troller in Southeast Alaska holds a small amount of sablefish IFQ, but their vessel is too small to fish HAL or pots. As walk-on rates increase in the IFQ fisheries, it has become too expensive for some to justify bringing sablefish IFQ on board someone else's vessel.
- A jig fisherman in the Central GOA targeting another species also has sablefish IFQ. They catch sablefish and would no longer be required (nor allowed) to discard it.
- A sablefish QS holder with a small amount of IFQ jigs on a vessel already using HAL or pot gear (mixed gear trip). This may be less likely than other scenarios due to higher efficiency of pot and HAL gear; it may be inefficient to use jig gear in addition.

There are several ways to estimate a rough maximum of the number of participants that may use jig gear to harvest sablefish IFQ. Table 4-13 shows the number of sablefish IFQ holders in each regulatory area in 2020. In 2020, 204 vessels (82%) that targeted sablefish were <60 ft LOA (Figure 4-12). In combination with input from stakeholders, it is anticipated that most vessels using jig gear would be <60 ft. LOA. Using this information, the analysts estimate that sablefish jig fishermen would be predominantly C-class sablefish QS holders, of which there were 1,568 in 2020. If current trends remain, it can be expected that most jig fishing would continue to occur in the GOA. This would leave 1,507 sablefish IFQ holders in 2020. It is expected that this estimate is much higher than the number of IFQ holders who would use this opportunity; this is a very high maximum bound, as many of these sablefish IFQ holders would use pot or HAL gear.

⁴³ Personal communication, L. Behnken, T. Fujioka, and D. Kasprzak, August/Sept 2021.

Table 4-13 Number of QS holders and units in the sablefish IFQ fisheries in 2020 by area and vessel category

Area	QS holders				QS units				% TAC harvested
	A	B	C	Total	A	B	C	Total	
AI	49	76	41	165	17,952,283	11,319,633	2,643,346	31,915,262	72
BS	35	59	52	145	7,470,227	7,754,799	3,534,089	18,759,115	22
CG	72	324	463	850	17,557,104	53,057,658	41,070,992	111,685,754	64
SE	71	160	702	923	6,133,979	13,436,073	46,550,424	66,120,476	73
WG	57	136	98	289	13,671,401	15,597,495	6,752,807	36,021,703	81
WY	48	177	244	466	4,373,738	32,262,359	16,623,663	53,259,760	79

Note: Counts are not additive across areas. Includes CDQ. X indicates confidential data.

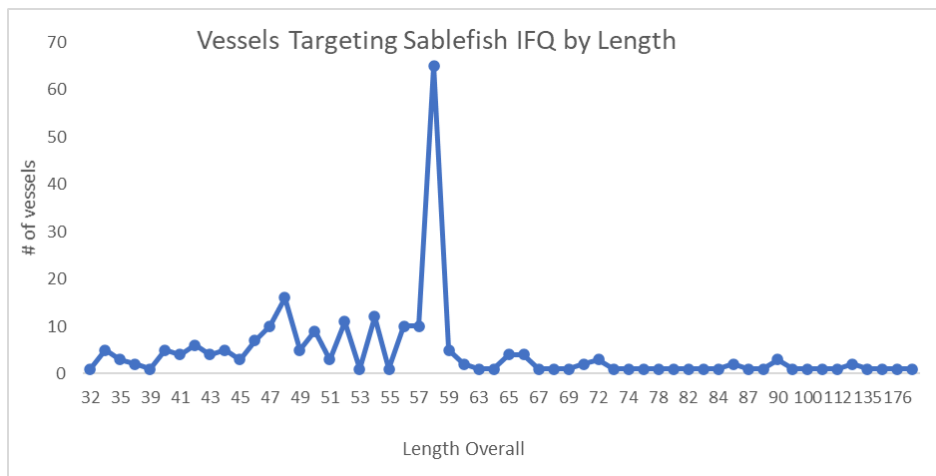


Figure 4-12 Number of vessels targeting sablefish IFQ by length (2020)

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA

Those with knowledge of the fishery indicated that IFQ holders with less than 800lbs of sablefish may utilize smaller vessels that have not historically been in the fishery to harvest their small amounts of IFQ. As of 2020, there were 137 IFQ holders in the GOA that held less than 800lbs of sablefish IFQ and 28 IFQ holders that held less than 800lbs of sablefish IFQ in the BSAI (NOAA Fisheries, RAM 2021). A portion of these QS holders may walk on to other pot or HAL vessels. Using this method, one estimate for the maximum number of QS holders likely to use jig gear to harvest sablefish is 165 QS holders. Again, it is unlikely that all these QS holders would use jig gear.

4.7.4. Effects of Tunnel Opening Size (Element 4)

Alternative 2, Element 4 would remove the requirement for a 9-inch maximum width of tunnel opening in pots for vessels with unfished halibut IFQ in the GOA. This would create consistency with regulations in the BSAI. During the development of Amendment 101, the Council was cognizant of concerns surrounding changes to the traditional nature of the directed halibut fishery, which has historically been prosecuted with HAL gear (NPFMC 2016). The Council did not provide any measure to define or enforce the “incidental” nature of halibut catch in sablefish pots in Amendment 101, but in its letter to IPHC (described in Section 1.2) assured the IPHC that it would monitor the amount and size of halibut caught in GOA sablefish pots so that it would be equipped with the information necessary to limit retention if it became an issue.

The 9-inch tunnel opening is often referred to as a “halibut excluder”, as it was originally intended to reduce incidental catch of halibut while groundfish fishing with pots. As the fisheries have evolved and HAL fisheries have experienced increased whale depredation, the desire to exclude halibut from pots has also changed.

At its April 2021 meeting, the Council discussed the need to be proactive about whale depredation issues, and how ‘getting ahead of the whales’ in terms of depredation of halibut on HAL gear could prevent wastage of halibut and be beneficial to fishery participants. The Council noted that it may only be a matter of time before depredation of halibut on HAL in the GOA increases to similar levels experienced in the BSAI or by sablefish fishermen in the GOA. Those with knowledge of the fishery have noted that the whales have already become problematic enough on the edge in certain areas such as WYAK that less directed halibut fishing is occurring there.⁴⁴

Allowing participants to essentially target halibut in pot gear would increase operational efficiency; participants would not be required to deploy two different types of gear to target each IFQ species. Many of the participants in the sablefish IFQ fishery are also halibut IFQ holders. IFQ participants who carry both sablefish and halibut quota are quite adept at targeting one species or the other or both species at the same time by fishing different depths or habitats. Requiring a vessel to use a different size tunnel opening for different IFQ species may unnecessarily restrict fishery participants and reduce operational efficiency by requiring different gear specifications to be used to harvest separate IFQ species that could otherwise be retained simultaneously. Conversations with those involved in the fishery indicate that there are some IFQ fishermen who would benefit from the flexibility to use a larger tunnel opening for targeting larger sablefish, and they would prefer this element to not be exclusive to halibut IFQ holders.

Fishery participants have indicated that this requirement confounds their ability for designing a pot that can catch sablefish *and* halibut, which would increase harvest efficiency. While it is unclear whether all vessels in the GOA IFQ pot fishery would use the flexibility afforded by Element 4, those that choose to would benefit from this flexibility, as they would be able to choose a gear design that allows increased selectivity of target catch. It is not clear how many more harvesters would switch from targeting halibut using HAL gear to pot gear as a result of this action. However, as described at the beginning of Section 4.7, it is not likely that there would be a large influx of vessels switching from HAL to pot gear for halibut as a direct result of this specific flexibility alone.

Despite increased flexibility under Element 4, as written, (and the way it has been implemented in the BSAI) Element 4 could still present operational challenges for some IFQ fishermen. One fishery participant noted that if fishery participants use all their halibut IFQ earlier in the season, pots with a greater than 9-inch tunnel opening would no longer be in compliance with the regulation. This poses a challenge to fishery participants who then continue to fish for sablefish later in the season, as it would require either swapping out pot tunnels or using a different set of pots entirely that has the appropriate tunnel size. For most fishermen, it is unrealistic to have two different sets of pots for IFQ species- one for sablefish and one for halibut. In comparison, the HAL fisheries are not subject to the same type of requirement to switch out gear when switching between species. One solution to this would be fishermen saving some of their halibut IFQ “in their pocket” so that they remain able to use the exemption and stay in compliance with regulations. However, if there are any sablefish fishermen who do not have halibut IFQ who would like more flexibility to increase the size of the tunnel opening, the element as currently written would not benefit those stakeholders.

On the other hand, while fishermen do need to plan harvest timing within certain seasons, they have the flexibility to choose the timing of their operations, taking into account where fish will be at certain times of the year and what other fisheries they need to plan for within their fishing portfolio. In this way,

⁴⁴ Personal communication, A. Stubbs, August 2021.

Element 4 as written would provide some flexibility in that IFQ fishermen could more effectively target halibut or larger sablefish, but flexibility is still limited by the requirement to have unfished halibut IFQ. Therefore, fishermen who possess only sablefish IFQ would not be able to benefit from the flexibility provided under Element 4.

4.7.5. Effects of Pot Limits and Gear Retrieval Requirements (Elements 5 and 6)

Alternative 2, Elements 5 and 6 propose that regulations be revised to change pot limits and gear retrieval requirements, respectively. These two elements are included in the same section here because the types of effects of these elements on IFQ fishery participants are expected to be similar.

Considering area-specific pot limits as part of GOA Amendment 101 allowed the Council to account for the make-up of the fleet and the physical nature of the sablefish fishing grounds in each management area. The Council acknowledged that lower pot limits could be appropriate in areas where the fishing grounds are spatially concentrated and grounds preemption is a pressing concern, or where the local fleet has a historically participating component of small, short-range vessels lacking the capacity to deploy and retrieve longline pots or pack a large hold of sablefish over many days and long distances. The Council adopted a precautionary approach by recommending pot limits for all areas of the GOA. The intent of the pot limits was to cap the total amount of fishing grounds that any single vessel could preempt at a given time. A pot limit can also be viewed as a measure to equalize effort between vessels converting to pot longline gear and those continuing to fish with HAL gear (NPFMC 2016).

However, limiting the number of pots reduces operational efficiency if the limit is lower than what a skipper deems optimal for his or her vessel. Relative to no limit, or a limit that exceeds what is privately optimal, a low limit may increase variable fishing costs such as fuel and time. More restrictive pot limits may cause fishermen to turn over their pot longline gear more often. Reduced soak times could marginally reduce one of the benefits of pot longline gear – size selectivity. More time on the bottom provides smaller fish an opportunity to swim out of the pot through an escape ring. Ideally, skippers would use their knowledge of catch rates and fish size in a particular area to choose the amount of soak time that selects for larger fish but allows them to keep rotating and re-baiting their strings of pot longline gear. If the maximum number of pots is lower than what allows for constant gear rotation at the optimal period, fishermen experience greater stand-down time while pot longline gear is soaked to sort for fish size.

Changing the pot limits for WY and/or SEO to 180 pots per vessel (suboption a) would allow each vessel to deploy 60 more pots in those areas, but would keep pot limits lower than other parts of the GOA, which could address some of the concerns of the HAL fleet in terms of the gear capacity on the fishing grounds and gear conflicts. Changing the pot limits to 300 pots per vessel (suboption b) would maintain consistency across all areas of the GOA, but gear conflicts and grounds preemption issues would be more likely in congested areas than under a lower limit.

Element 6 would either remove GOA gear retrieval requirements entirely (option 1) or increase the amount of time gear can be left on the fishing grounds to either 7 days for all GOA areas (option 2) with a suboption for 3 days in SEO. Gear retrieval requirements were primarily meant to limit a vessel’s “footprint” on the fishing grounds.

Since implementation of the GOA sablefish IFQ pot fishery, no systematic data collection on preferences of gear retrieval requirements has occurred. NPFMC 2021 and subsequent testimony highlighted some of the challenges that pot fishermen experience in the GOA with gear retrieval requirements. One such challenge is that due to bad weather, fishermen do not want to bring gear back in due to stability concerns. This is expanded on in Sections 4.7.7 and 4.9.1 on vessel safety and enforcement

considerations. For vessels still using conventional (not slinky) pots, the weight of these pots and the space needed on deck can increase stability issues and risk.

Gear retrieval requirements can also increase operational costs such as monetary expenditures on fuel, and crew time. One example of this is when it would be more effective for a vessel to do a “town soak” in which gear is left on the grounds to fish, while the vessel goes into town to sell. Some stakeholders have indicated that this actually gets them off the fishing grounds faster overall, and allows them to consume less fuel. Less time on the grounds overall could decrease potential for gear conflicts, however it is likely that amount of time on the grounds and the effect of gear retrieval requirements varies by each operation and the geographical area being fished.

As the number of vessels using pots increases, particularly in the SE GOA, increasing pot limits and/or gear retrieval requirements could increase the potential for gear conflicts with the HAL fleet. However, fewer HAL vessels may lead to a corresponding decrease in the potential for gear conflicts. Table 4-14 shows the large increase in the number of vessels using pots in all GOA management subareas, particularly between 2019 and 2020. During the GOA sablefish pot review, stakeholders and IFQ Committee members noted their concerns surrounding the higher potential for congestion and gear conflicts in the Eastern Regulatory Area, particularly in SEO. The suboption to have a 3-day gear retrieval requirement in the SEO area may better address some of these concerns, assuming gear would be left on the grounds for an overall decreased amount of time, taking into account the factors noted in the previous paragraph.

Table 4-14 Vessels that harvested sablefish IFQ by GOA subarea and gear type

Year	WG		CG		WY		SE	
	Pot	HAL	Pot	HAL	Pot	HAL	Pot	HAL
2014		59		168		103		183
2015		54		161		99		178
2016		61		156		103		177
2017	6	54	18	144	10	96	10	166
2018	11	50	17	136	9	89	12	169
2019	14	39	24	119	14	82	14	159
2020	27	24	72	86	39	68	44	143

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA

Note: Includes vessels that fished multiple areas or both gear types (vessels are double counted if they fished in more than one area or used both gears).

Even if fishery participants choose to use maximum flexibility provided through this action (i.e., higher pot limits under Element 5, extended gear retrieval time under Element 6), it is expected that harvesters will likely find some optimal number of pots and amount of time on the grounds beyond which the costs of fishing (fuel, time, bait) are not offset by increased catch. Vessels will eventually be limited by the number of pots or weight of catch they can carry, or by optimal time on the grounds beyond which the quality of catch may deteriorate and the vessel needs to deliver. Previous documents have described an optimal amount of time for gear to be left on the grounds after which product quality diminishes and harvesters have an incentive to optimize pot gear fishing effort to maximize IFQ harvest in the minimum amount of time (NPFMC 2016, NPFMC 2019). Therefore, it is likely that even under Alternative 2 Elements 5 and 6, vessel operators privately limit the number of pots they deploy and would not leave pot gear deployed for unnecessarily extended periods of time.

NPFMC 2016 and discussion during the 2021 IFQ Committee and Council meetings noted that vessels using HAL gear are not limited by regulation in the amount of gear that they can deploy nor the amount

of time they can leave gear on the grounds, and that pot limits and gear retrieval requirements are borne by pot fishermen in the GOA alone.

4.7.6. Discussion of Interacting Elements under Alternative 2

The elements under Alternative 2 may be chosen independently of each other, but it is important to consider the interactions of the chosen elements and the potential for cumulative impacts under certain combinations. Certain elements of Alternative 2 could differ in terms of the magnitude and type of impacts depending on which other elements are chosen as part of the Council's preferred alternative.

The following interactions of specific elements are worth highlighting:

- Element 4 (nine inch maximum size of tunnel opening exemption), Element 5 suboption b) (300 pot limit GOA wide), and Element 6 option 1 (remove gear retrieval requirement) chosen together would offer the most flexibility and could yield the largest magnitude of potential impacts. Potential impacts of this combination:
 - IFQ pot participants would benefit from maximum flexibility. Ability to use more pots under Element 5 combined with more time allowed on the grounds under Element 6 could increase likelihood lost gear and gear conflicts, unless, as described in Section 4.7.5, operational efficiencies provided through these elements actually result in vessels using pots to have a small overall fishing footprint.
 - Potential negative environmental impacts would also be cumulative: If more pots (Element 5) are designed with a larger tunnel opening (Element 4), any increase in incidental catch due to larger tunnel openings as described in Section 5.2.2/5.4 could also be exacerbated.
- If Element 2 is not chosen, but Element 4 is chosen: requirements that apply to gear “deployed to fish sablefish IFQ,” for example, buoy and flagpole requirements, are not currently applied to gear used to fish halibut IFQ. Therefore, depending on how NMFS defines “gear deployed,” there could be a situation where vessels intending to fish for sablefish have buoy and flagpole requirements that are different from and inconsistent with requirements for vessels intending to fish halibut, despite both using the same longline pot gear type.
- Allowing increased number of pots through Element 5, combined with increasing use of slinky pots changes to the tunnel opening under Element 4, yields uncertainty in impacts across resource components because of the limited data collection with which to differentiate slinky pots from conventional pots. This is expanded on in Section 4.9.

4.7.7. Impacts on Vessel Safety

Under the action alternatives, vessels are not being required to carry any extra gear and would have the option to participate in the opportunity created by this action. Alternative 2, Elements 2 and 6 in particular, may increase safety for vessels using pot gear in the IFQ fisheries, though it is unlikely that vessel safety would change significantly from the status quo.

More gear on deck can lead to a decrease in vessel stability and in turn the safety of crewmembers. Element 2, which would eliminate the buoy and flagpole requirements, would reduce the amount of gear required for vessels deploying pot gear for IFQ in the GOA (described in Section 4.7.2). Element 6, changes to gear retrieval requirements, would either eliminate gear retrieval requirements or increase the amount of time gear can be left on the fishing grounds (as described in Section 4.7.5). Increasing the

flexibility in the amount of time that vessels are allowed to remove their gear from the grounds could alleviate occurrences of vessels attempting to tend their gear in unfavorable ocean conditions or poor weather. While Element 5 could result in an increase in the number of pots onboard a vessel, any increase in the number of pots is voluntary under this action. All vessels would continue to be subject to stability standards stating that vessels may not have instability resulting from overloading, improper loading, or lack of freeboard.

During review of the GOA sablefish pot fishery and subsequent testimony, fishery participants have reiterated the importance of having both ends of the gear marked. Marking both ends of each pot longline string has two main benefits. First, other fishermen can more easily discern the location of the pots on the ocean floor – roughly on a line between the buoys – so gear conflict would be marginally easier to avoid. Second, if gear conflict does occur and a groundline is parted, the pot longline string could be hauled up from the buoy on either end as opposed to having to grapple for part of the lost string as it sits on the bottom.

4.8. Analysis of Impacts: Alternative 3

Alternative 3, a five-year exemption from the requirement that IFQ pounds derived from Adak CQE-held QS be used only by an eligible community resident of Adak, would require a change to federal regulations at 50 CFR 679. The exemption would allow ACDC, the non-profit which has purchased and holds halibut and sablefish IFQ, to lease QS to non-residents on an annual basis in an effort to increase utilization of CQE-held quota and stimulate a stable fishing economy in the community.

If selected, Alternative 3 would be contrary to the first performance standard of the CQE Program (listed in Section 4.5.3) but may increase benefits derived by the community as a whole and better ensure that leased quota does not go unharvested. A five-year exemption of the residency requirement alone is not likely to attract a large number of residents back to Adak and stabilize the fishing economy but is a crucial component of a larger effort to assist the community in establishing a sustainable civilian economy.

4.8.1. Impacts on Adak Quota Recipients and the Community

Under Alternative 3, the ACDC would be able to lease IFQ derived from CQE-held QS to both residents and non-residents of Adak. The beneficial impacts of Alternative 3 would most likely be directed towards recipients of CQE-derived IFQ, and the community, as a result of any economic benefits that are gained due to this action.

The residency requirement has surfaced several times previously in the context of the GOA CQE Program. In the 2010 Review of the Community Quota Entity (CQE) Program under the Halibut/Sablefish IFQ Program, it was noted that the 12-month residency requirement provides a barrier as communities attempt to provide fishing opportunities as an incentives for residents to return to the community. One of the primary objectives of the CQE Program is to provide an opportunity for employment and fishing effort in CQE communities that have seen a transfer of QS out of their communities, and thus are attempting to attract resident fishermen back into their communities, including young fishermen. However, the current situation in Adak is unique. Unlike the GOA communities, the population is closely linked to the status of the local processor, there are less diversified fishing opportunities, and an original goal in the development of the Adak CQE was to attract residents back into the community rather than retain current residents. These have all contributed to the difficulties in developing a sustainable economy ever since the departure of the military.

Alternative 3 has the potential to make it easier for individuals who lease QS to find a vessel to harvest IFQ. As noted, young residents of Adak have difficulty gaining commercial fishing experience and

therefore struggle to find vessels willing to take them on as crew. Non-residents who have gained experience in fisheries outside of the AI may be more successful in finding access to a vessel to fish leased community-held IFQ on, ensuring that community IFQ is more fully utilized.

To ensure benefits are equitably distributed throughout the community, ACDC has always prioritized the leasing of QS to residents even during years when the exemption was in place. During the first five years, this was done through the points-based distribution criteria (4.5.4). Despite a residency exemption during the first five years of the program (2014-2018), Adak residents have been the primary beneficiary of halibut and sablefish IFQ pounds derived from QS held by the ACDC and community quota has only been fished on Adak-based vessels since 2016 (Table 4-7). From 2015-2018 more than 50% of the halibut and 100% of the sablefish was leased to Adak residents (Table 4-4 through Table 4-6). The CQE has not appeared to have ‘maximized benefits’ by leasing to the highest bidder and deriving benefits in the form of economic revenue over job opportunities to residents – a potential consequence previously discussed by the Council.

While there are benefits to Alternative 3, an operating processing plant may be crucial for the benefits of Alternative 3 to be fully felt, as non-residents who have previously leased quota were captains and crewmen who had history delivering to the processing plant in Adak. Without the plant operating, there could likely be less port-calls to the community and less fishermen around to lease the quota, described in Sections 4.5.4.2 and 4.5.4.3. As previously noted, Peter Pan Seafoods Co. LLC has suspended their plans to reopen the Adak processor. IFQ holders attempting to fish CQE-held IFQ will need to find alternative means of landing and processing fish. The reopening of a processing plant is essential to rebuilding a pool of resident fishermen.

One argument for the initial five-year exemption was to offer an opportunity for non-resident cod fisherman to lease IFQ to retain halibut and sablefish bycatch. This opportunity was not often used, and only one or two vessels, both of which are Adak-based, may have utilized IFQ in this way.⁴⁵ With no Pacific cod processing currently occurring in Adak there is a decreased likelihood that non-residents may be incentivized to lease quota for this purpose.

The first performance standard was intended to encourage CQEs to lease IFQ to residents that would employ residents of the eligible community as crew members. During the previous residency exemption, it was rare for a vessel with a non-resident who had leased IFQ from the CQE to also have residents of Adak employed on it. Alternative 3 may result in a similar situation, given that there is a limited pool of residents in Adak with fishing experience. Non-resident lessees may opt to employ more experienced non-residents on their vessels over those who reside within the community.

Employment

One of the primary objectives of the CQE Program is to provide an opportunity for employment and fishing effort in CQE communities that have realized a transfer of QS out of their communities, thus, many CQE communities want to attract resident fishermen back to their communities. Alternative 3, as compared to Alternative 1, would provide one way to encourage non-residents to return, and eventually become residents. However, without the reopening of the processing plant or the return of a military presence, the employment structure in Adak is unlikely to change under Alternative 3 when compared to the No-Action Alternative. With no other shore-based processor in the community, the Pacific cod processing activity at the Adak shoreplant accounts for a large proportion of local employment in Adak. The operations at the processing plant increase demand for a variety of services including support for

⁴⁵ Personal correspondence, D. Fraser,, 6/17/2021

crew rotations, fuel supplies, and emergency medical services at the local clinic. Alternative 3, on its own, would contribute minimally to overall increases in employment in the community.

ACDC Payments and Tax Revenue

Allowing non-residents to lease community IFQ would directly contradict the first performance standard. However, the decrease in population has resulted in an outmigration of residents qualified to lease QS and has likely influenced the drop in halibut and sablefish landed. Re-opening of a processing plant in Adak would likely draw individuals to the community and increase the number of eligible residents, but as noted earlier all previous plans to reopen the plant have been suspended.

In 2019 and 2020, the funds collected by ACDC were drastically lower than they had been in previous years, which reduces the amount of money available to further develop the fisheries infrastructure of Adak (Figure 4-7). Under Alternative 3, the leasing of CQE to non-residents could increase the revenue that ACDC would be able to collect and put back into building and stabilizing the fishing economy of Adak. Although the Council has previously emphasized that one of the primary goals of the CQE program is to enhance participation in the fishing industry, the five-year exemption could provide enough time for the community to rebuild its population while allowing ACDC to continue to utilize funds to enhance the fishing infrastructure in the community. In regard to the quota distribution process, it is important to note that although NMFS does require that a criteria is developed, it does not specify what that criteria may be. If this action were to move forward, the Council may want to consider specifying ACDC implement the same or a similar distribution system to ensure direct benefits via receiving CQE-held QS are first realized by residents.

Alternative 3 alone is unlikely to revive the fishing economy in Adak but is a component of multiple ongoing efforts that could positively impact the community and revive its fishing economy. There is no guarantee that the five-year exemption alone, or even in combination with other ongoing efforts, would improve the current economic situation in Adak. The community would benefit from operating businesses that can provide consistent employment –in conjunction with a consistent flow of fish, this exemption under Alternative 3 is one piece of a larger effort to build that business portfolio. However, increasing incentives for vessel operators to operate out of and deliver to Adak and landings of leased halibut and sablefish QS will be crucial in ensuring a processing plant is able to become established and stable, which could further assist in rebuilding the local economy. and this exemption is one piece of a larger effort to build that business portfolio

4.8.2. Impacts to Other IFQ Fishery Participants

The proposed action under Alternative 3 does not directly regulate participants in the IFQ Program that do not use IFQ derived from CQE-held QS, and would not affect the general trends relevant to QS and vessel use under the status quo. Under Alternative 3, non-CQE participants in the halibut and sablefish fisheries would continue to be subject to the same rules in the existing IFQ Program without change. However, Alternative 3 may create additional opportunities for vessel owners to use IFQ (derived from CQE-held QS), whether or not the vessels are owned by residents of the CQE community. This is because residents of Adak who do not own vessels could lease annual IFQ from the CQE and bring it onboard any eligible vessel.

If an individual harvesting halibut in Area 4A or sablefish in the AI uses any IFQ derived from CQE-held QS on a vessel, then that vessel would be limited to 50,000 lbs of Area 4B halibut IFQ and 50,000 lbs of AI sablefish IFQ derived from CQE-held quota per fishing year. However, in total, the vessel would be subject to the overall vessel use caps applicable in the general program, which allows for the use of IFQ over and above the 50,000 lbs, as long as it is not derived from quota held by the CQE. As mentioned previously, one possible scenario is that hook-and-line catcher vessels fishing in the AI State water

Pacific cod fishery that deliver to Adak could employ an Adak resident leasing halibut IFQ from the CQE as a crewmember, and use that IFQ onboard during the Pacific cod fishery. Absent IFQ onboard, participants are required to discard halibut caught incidentally in this fishery.

No significant effects on individual participants in the IFQ fisheries, or residents of non-CQE communities, is anticipated under Alternative 3 compared to the status quo. The analysis for Amendment 102 already analyzed the impacts of this action on existing IFQ holders and the market; the only change from status quo due to this action is extending the exemption to the residency requirement.

4.9. Management, Monitoring, and Enforcement Considerations

4.9.1. Alternative 2

This section describes the management, monitoring, and enforcement considerations for each element of Alternative 2. This section also highlights some of the current challenges with collecting survey and fishery-level data on tunnel shaped collapsible pots, herein referred to as “slinky pots” (refer to Section 4.5.2 for a description of this novel gear type) and outlines agency recommendations for additional regulatory changes outside of the Council’s motion.

Element 1

Beginning with the 2017 fishing season, the Council recommended and NMFS implemented regulations to authorize, but not require, the use of longline pot gear in the GOA IFQ sablefish fishery and allow retention of halibut. Since this authorization in the GOA, there has been a resurgence in pot gear use, as well as an increase in gear modifications, such as slinky pots. The Council motion highlighted the need to clarify slinky pots as a legal gear type, in part, due to the increase in pot gear and the widespread use of slinky pots. NMFS clarified that slinky pots may be used as long as the pot is equipped with an 18-inch biodegradable panel. These requirements are described in detail in the Frequently Asked Questions webpage published by the agency in 2021.⁴⁶

Element 1: Data Collection on Slinky Pots

NMFS is working to gather more data on slinky pots to determine a suite of effects of using this gear type over hook and line gear or conventional pots. Although there are benefits to using pots such as reduced whale depredation and reductions in bycatch (Section 2.2), NMFS does not have the ability to gather fishery-level data on slinky pots separate from the conventional square pots or conical pots. Additionally, pot catch per unit effort (CPUE) is not included in the sablefish fishery CPUE index and stock assessment authors are continuing to explore development of a catch rate index for hook and line and pot gear (NPFMC 2021). NMFS is also working to explore the differences between slinky pots and square pots for catch rates, catch composition, and size selectivity.

In the summer of 2021, AFSC conducted a three-day pilot experiment in the West Yakutat region using slinky pots. The objective of this pilot study was to compare catch rates and catch composition between standard longline survey hook-and-line gear and slinky pots. Each day, two sets were deployed in comparable geographic areas, depth profiles, and habitats. One set was composed of standard survey hook-and-line gear with 90 skates, and the other set was composed of 90 slinky pots, each fitted with four 3.5-inch escape rings. To obtain catch rates and species composition, the catch on each hook and within each pot was recorded to species level. Additionally, length data were collected to examine the length compositions of the catch. This pilot study was a small-scale experiment, but it will provide preliminary

⁴⁶ <https://www.fisheries.noaa.gov/alaska/commercial-fishing/longline-pot-gear-gulf-alaska-ifq-sablefish-fishery-frequently-asked>

data needed to design future experiments on catch rates, catch composition (e.g. bycatch), and size-selectivity of slinky pots.

NMFS is also exploring several ways to collect more data about slinky pots since NMFS recognizes that there is an increased use of pots but the agency is lacking comprehensive data on their use. NMFS identified several challenges for gathering information on slinky pots across the entire fishery, which include:

- There are multiple pot types configurations (i.e., conical, slinky, square) and currently there is no way to differentiate which type of pot is used when data is reported by fishermen.
- Both haul level and effort data are needed to fully understand the use of slinky pots. ELandings could provide trip-level information but there is not a single data source that provides haul-specific data for the entire fleet.
- Haul-specific logbook information is collected on monitored trips (either by observers or electronic monitoring (EM)). However, for unmonitored trips, logbooks are submitted to OLE but the haul specific effort information is not entered into a database.
- The agency is exploring options to collect more information on this novel gear type (Table 4-15).

Table 4-15. Avenues for collecting additional data on slinky pots

Data set	Potential change	Data Resolution	Challenges	Status, Timeline, and feasibility
Catch Accounting System (CAS)	Identify slinky pots in catch data	Trip	<ul style="list-style-type: none"> • Currently, cannot differentiate pot “type” • Cannot independently change without changing other systems that are integrated into CAS (i.e., eLandings, EM, observer data) 	Longer term
eLandings	Add new pot type(s) as a dropdown menu for eLandings landing reports (i.e., fish tickets)	Trip	<ul style="list-style-type: none"> • Confusion around gear codes, need to improve outreach strategies with the implementation of a new data entry field 	Currently in development and will be fully implemented by early 2022
Federal logbooks	New checkbox or entry on Daily Fishing Logbook (DFL)	Haul	<ul style="list-style-type: none"> • Would require changes to regulations and an update to the logbook • Logbook data are not entered into a 	Longer term

			database for the entire fleet <ul style="list-style-type: none"> • Self-reported and potential issues with data quality would require outreach strategies to fishery participants 	
IPHC logbooks	New field	Haul	<ul style="list-style-type: none"> • Funding and complications with providing additional data 	Not a feasible option
Fixed gear electronic monitoring	Include ID of pot type in PSMFC video review data	Haul	<ul style="list-style-type: none"> • Only available for trips selected for EM monitoring 	Already exists in video review protocol and NMFS needs to modify data structures to incorporate the information. Could be in place for 2022.
Observer data	Have observer ask question about gear type at end of haul	Haul	<ul style="list-style-type: none"> • Haul level, not trip level • Observer reported 	Observer Program Special Project began in the summer of 2021 and is operating as a trial project to inform a 2022 project
Prior notice of landing (PNOL)	Data clerk asks what type of gear fishermen is using at time of PNOL reporting	Trip	<ul style="list-style-type: none"> • This OLE dataset is typically used by NMFS • Would replicate the information that could be gathered in eLandings 	Would require changing Standard Operation Procedures (SOPs) for data entry/what's reported out, doesn't fit into the description of the contract, and would likely require a regulatory change

Element 1: Biodegradable Panel

Currently, the requirements for a biodegradable panel state that each pot used to fish groundfish must be equipped with an 18 inch biodegradable panel that is within 6 inches of the bottom of the pot and is sewn with untreated cotton thread no larger than No. 30 (50 CFR part 679.2(15)(i)). This is described in greater detail in Section 2.2. When drafting any change to regulations, NMFS considers the scope of the regulation change and how the new regulations would be enforced by OLE. The current gear definition at §679.2(15)(i) is applicable across all groundfish pot gear fisheries.

The Council motion currently limits the scope of this regulation change to the IFQ sablefish fishery. To implement this recommendation, NMFS would add a paragraph to the existing definition of authorized pot gear that would describe the use of a biodegradable door latch as an acceptable alternative to a

biodegradable panel when using slinky pots. If the Council intended the door latch option to be applicable to more than just the use of slinky pots in the IFQ sablefish fishery, the Council could expand the scope of this option and analyze the potential impacts of this option for all authorized pot gear in all of the groundfish fisheries.

Escape Rings:

Escape rings, their use, and associated benefits in pot fisheries are described in greater detail in section 4.2 and 4.4 of the EA. Federal regulations do not prohibit the use of escape rings in pot gear and many participants use pot gear with escape rings. The addition of an escape ring is not a substitute for a biodegradable panel as required in federal regulation. State regulations require at least two circular escape rings, with a minimum diameter of 4 inches installed on opposing vertical or sloping walls of the pot.⁴⁷ There is a Board of Fisheries proposal to reduce the minimum diameter from 4 inches to 3.75 inches.⁴⁸ If the Council moves forward with regulatory changes to the definition of biodegradable panel (Element 1) and tunnel size (Element 4), they may wish to consider if escape rings should be a requirement in IFQ halibut and sablefish fisheries. There are benefits to aligning federal regulations with state requirements, such as consistency across fisheries, and clarity for enforcement.

Element 2

For Element 2, buoy and flagpole configuration and marking requirements, NMFS recommends that any changes to marking requirements are clearly defined and easily distinguishable from other gear types. This aids enforcement officers, agents, and other vessel operators in readily identifying gear types during at-sea inspections.

Element 3

For Element 3, the Council wishes to authorize jig gear as a legal gear type for the harvest of sablefish IFQ. In June of 2020, an informational paper was provided to the Council explaining the current regulations for jig gear. This paper concluded that jig gear is not an authorized gear type in the IFQ sablefish fisheries (NMFS 2020). Three conclusions were provided based on gear definitions at § 679.2 (i.e., hook-and-line was specified as the only authorized gear type) and gear restrictions at § 679.24 for each sub area (i.e., EGOA, GCOA, WGOA, and BSAI). While jig gear is not an authorized gear type for IFQ sablefish, it is an authorized gear type for IFQ halibut in the GOA and BSAI. In consideration of the June 2020 motion, the Council may wish to specify if jig gear should be an authorized gear type in the sablefish IFQ fisheries for both the GOA and BSAI. The Council could also consider whether jig gear should be an authorized gear to harvest sablefish CDQ in the GOA and BSAI.

Contrary to the conclusions found in the June 2020 information paper, for the GOA, Table 15 to Part 679 states that jig gear is an authorized gear type for sablefish harvested from any GOA reporting area. This table was last updated by the final rule implementing Amendment 101 to the GOA FMP (81 FR 95435, January 27, 2017). The primary purpose of this table is to define the gear codes, descriptions, and use of these gear codes for recordkeeping and reporting purposes. NMFS interprets the inclusion of jig gear in the description of authorized gear for sablefish harvested from any GOA reporting area included in Table 15 to Part 679 as an error. If the Council recommends that NMFS authorize jig gear for sablefish IFQ, regulations will need to be updated consistently across sablefish IFQ, the GOA, and the BSAI. Any change to regulations should consider how regulations will be interpreted and enforced.

Observer coverage requirements are an additional monitoring consideration for authorizing jig gear for the harvest of sablefish IFQ. Currently all vessels greater than 40 ft. LOA harvesting sablefish IFQ with

⁴⁷ <https://www.adfg.alaska.gov/static/applications/dcfnewsrelease/1029668426.pdf>

⁴⁸ <http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2020-2021/proposals/221.pdf>

pot or hook and line gear are in either the observer or EM selection pools under the Annual Deployment Plan (ADP). Under the ADP, vessels of all sizes fishing with jig gear have been and are currently placed in the no-selection pool. Vessels in the no-selection pool are not required to log fishing trips in ODDS, nor are they required to comply with observer or EM requirements. In the ADP, since 2013, vessels of any length in the partial coverage category and exclusively fishing with jig gear have been in the no selection pool. Observer or EM coverage for vessels using jig gear could be required under a future ADP, however observer sampling and EM data review protocols would need to be developed for this gear type.

Element 4

Element 4 would revise pot gear configurations requirements to change the maximum size of the tunnel opening as described in Section 2.2. Staff interpret that this element would only apply in IFQ Program fisheries. However, the scope of regulatory changes that may be necessary could be extensive. Regulations defining or referencing the definition of authorized fishing gear exist throughout Part 679. Authorized fishing gear is defined in 679.2 and references additional regulations in Table 15 to Part 679 (Gear codes) and § 679.24 for additional gear limitations. Regulations at § 679.7 includes prohibitions specific to the use of fixed gear for the purpose of harvesting halibut as well as prohibitions specific to the use of gear in the IFQ fisheries. Regulations at § 679.42 include further detail about authorized fishing gear in the halibut IFQ and sablefish IFQ fisheries as well as additional gear limitations and gear marking requirements. Additionally, many other regulations apply based upon which gear is being used - for example, record keeping and reporting requirements at 679.5 are defined based upon which authorized gear type is being used. Regulations at § 679.51 define observer coverage requirements based upon a combination of vessel type, gear use, and fishery management program. To modify authorized fishing gear definitions, NMFS must consider the potential implications as they may percolate throughout the extensive regulations as well as the recordkeeping and reporting requirements.

In addition to considering the scope and magnitude of the regulatory changes that could be necessary to implement the Council's recommendation, NMFS must also consider how the new regulatory requirements will be enforced. Anytime a change to the regulations implements an exception to the rule this adds to the likelihood that there may be confusion in interpreting the regulations. Additionally, it simplifies enforcement when the same rules apply to similar fisheries such as the IFQ and CDQ fisheries. However, if a vessel using pot gear in the IFQ fishery under this element would want to shift into the Pacific cod fishery, the vessel would need to modify their pot gear to comply with the applicable maximum tunnel opening and an Enforcement officer would need to be able to determine which regulations apply at any given time they may board a vessel.

Element 5 and Element 6

For Element 5 on pot limits and Element 6 on gear retrieval requirements, NMFS does not have management concerns at this initial review stage. However, any changes to regulation for pot limits and gear retrieval requirements would require a change to SOPs for reporting on the PNOL and flagged violations for data clerks and enforcement. Gear retrieval requirements in the SE region have resulted in numerous false statement investigations from pot gear boats requesting offloads with gear on the grounds for multiple reasons. All the gear tending "violations" enforcement is aware of are self-reported cases, often due to mechanical breakdowns or weather. Regardless of which options are selected for these elements, enforcement would prefer consistency across IFQ fisheries as it is easier to manage violations.

4.9.1.1. Additional Regulatory Considerations Recommended by NMFS

Daily Fishing Logbook (DFL) requirements for vessels less than 60 ft LOA using more than one gear type

This section includes information about a regulatory clarification that NMFS recommends to clarify logbook requirements for vessels under 60 ft LOA, which participate in the longline pot sablefish IFQ fishery. Existing recordkeeping and reporting regulations for vessels under 60 ft LOA were developed and implemented under Amendment 101 to the GOA FMP ([81 FR 95435, December 28, 2016](#)). Since implementation of Amendment 101, some vessels using pot gear in the GOA have also used H&L gear either on the same trip or on subsequent trips. NMFS has interpreted recordkeeping and reporting requirements as implemented under Amendment 101 to require these vessels to maintain a longline and pot DFL for the entire year following the first deployment of pot gear. The following description summarizes the applicability of the logbook requirements for vessels in this fishery:

- Per IPHC regulations at 20(1) vessels operating in the IFQ sablefish fishery, which are greater than or equal to 26 ft LOA are required to use one of the following logbooks: groundfish/IFQ longline and pot gear DFL; Alaska H&L logbook; ADF&G online-pot logbook; or IPHC logbook.
- Per Federal regulations at 50 CFR part 679.5(a)(4), for CVs less than 60 ft LOA, except for vessels using pot gear (as described in paragraph (c)(3)(i)(B)(1) and the vessel activity report in paragraph (k)), they are not required to comply with the reporting requirements of this section.
- Per Federal regulations at 50 CFR part 679.5(c)(3)(i)(B)(1), CVs less than 60 ft LOA, operating in the IFQ or CDQ sablefish fisheries and using longline pot gear in the GOA, or pot gear in the BSAI must maintain a longline and pot gear DFL.

Therefore, if a vessel is using longline pot gear to harvest IFQ/CDQ sablefish or IFQ/CDQ halibut, they are constrained to the requirement of using a DFL. If a vessel is not using longline pot gear, then they are not required to maintain a DFL.

There are active periods for different vessel types (i.e., CV using longline or pot gear) as established by 50 CFR 679.5(c)(2)(i)(A). A CV is active when gear is fishing in a reporting area, with the exception of areas 300, 400, 550, or 690. If a vessel is active they must record all pertinent information in the longline and pot gear DFL. If the vessel is inactive they need to record periods of inactivity. NMFS recommends revising regulations for vessels participating in the IFQ sablefish fishery and using both H&L and pot gear to record fishing effort for both gear types in the same DFL, each on its own page.

Additionally, regulations require vessels to maintain a separate DFL for longline pot gear and hook and line gear. A common practice is for vessels to record both gear types in the IPHC logbook, not in the Federal DFL because it is likely more user-friendly. *NMFS recommends clarifying these regulations so that vessels may record trip information for both pot and H&L gear in the same DFL.*

Fishing effort information recorded in the Daily Fishing Logbook

NMFS recommends revisions to the recordkeeping and reporting requirements for vessels using H&L or pot gear to change how the start of gear deployment and end of gear deployment are defined in regulation. Federal regulations in 50 CFR 679.5(c)(3)(vi) state that fishermen must record the start of deployment, when the first hook and line gear for a set enters the water. After a haul, the fisherman then records the end of retrieval, where the last hook-and-line gear of a set leaves the water, regardless of where the majority of the set took place. The current regulations that specify the gear set and retrieval information to be reported in the logbook creates confusion for vessel operators and observers. This confusion can result in inconsistency in the type of spatial information reported in the DFL by different vessel operators and can reduce the usefulness of this spatial data to NMFS stock assessment authors. Oftentimes, the location for the start of where the hook and line gear is misreported as the same location where the hook and line gear ends. This is likely due to a vessel retrieving gear opposite from how they set it. This results in the

same location being reported. There are many factors a vessel operator considers when choosing how to deploy and retrieve gear, most common are currents which change with the tides.

NMFS recommends in-depth review of regulations that define when gear deployment and retrieval starts for several gear types. This would enable the agency to better describe the information about fishing effort and fishing gear use NMFS and OLE seek to obtain through the logbooks and either confirm the existing regulations or propose revisions. A rulemaking process would include internal discussion with users of the logbook data, preparation of a written analysis, public input, and rulemaking, if NMFS determined that a regulatory revision is needed.

4.9.2. Alternative 3

NMFS does not have management concerns at this initial review stage for Alternative 3.

4.9.3. Cost Recovery

Section 304(d)(2)(A) of the MSA authorizes and requires NMFS to recover the actual costs directly related to the management, data, collection, and enforcement of the IFQ Program which includes time spent on this action. NMFS implemented a cost recovery fee program for the IFQ fisheries in 2000 (65 FR 14919, March 20, 2000). IFQ fishermen pay an annual fee based on direct program costs and the ex-vessel value of fish landed under the IFQ Program. The MSA limits the fee to 3 percent of the annual ex-vessel value of the IFQ fisheries.

NMFS assesses cost recovery fees only for fish that are landed and deducted from the total allowable catch in the IFQ fisheries. NMFS publishes the IFQ standard prices and fee percentage for cost recovery for the IFQ Program for the halibut and sablefish fisheries in the Federal Register. The fee percentage for 2020 was 3 percent (85 FR 82442, December 18, 2020).

4.10. Affected Small Entities (Regulatory Flexibility Act Considerations)

This section will be completed prior to Council final action.

4.11. Summation of the Alternatives with Respect to Net Benefit to the Nation

This section will be completed prior to Council final action.

5. Environmental Assessment

There are four required components for an environmental assessment. The need for the proposal is described in Section 1, and the alternatives in Section 2. This chapter addresses the probable environmental impacts of the proposed action and alternatives. A list of agencies and persons consulted is included in Section 7.

This chapter evaluates the impacts of the alternatives and options on the various resource components. The socio-economic impacts of this action are described in detail in the Regulatory Impact Review (RIR) of this analysis (Section 3).

Recent and relevant information, necessary to understand the affected environment for each resource component, is summarized in the relevant section. For each resource component, the analysis identifies the potential impacts of each alternative, and uses criteria to evaluate the significance of these impacts. If significant impacts are likely to occur, preparation of an EIS is required. Although an EA should evaluate economic and socioeconomic impacts that are interrelated with natural and physical environmental effects, economic and social impacts by themselves are not sufficient to require the preparation of an EIS (see 40 CFR 1502.16).

When determining whether an action significantly affects environmental quality, an EA should consider:

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

The effects analysis should capture the total effects of many actions over time that would be missed if evaluating each action individually. Concurrently, the Council on Environmental Quality (CEQ) guidelines recognize that it is most practical to focus the effects analysis on only those effects that are truly meaningful.

5.1. Methods

5.1.1. Documents Incorporated by Reference in this Analysis

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

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

This EIS provides decision makers and the public an evaluation of the environmental, social, and economic effects of alternative harvest strategies for the federally managed groundfish fisheries in the GOA and the Bering Sea and Aleutian Islands management areas and is referenced here for an understanding of the groundfish fishery. The EIS examines alternative harvest strategies that comply with Federal regulations, the Fishery Management Plan (FMP) for Groundfish of the GOA, the Fishery Management Plan (FMP) for Groundfish of the BSAI Management Area, and the Magnuson-Stevens Fishery Conservation and Management Act. These strategies are applied using the best available scientific information to derive the total allowable catch (TAC) estimates for the groundfish fisheries. The EIS evaluates the effects of different alternatives on target species, non-specified species, forage species,

prohibited species, marine mammals, seabirds, essential fish habitat, ecosystem relationships, and economic aspects of the groundfish fisheries. This document is available from <https://www.fisheries.noaa.gov/resource/document/alaska-groundfish-harvest-specifications-environmental-impact-statement-eis>.

Alaska Groundfish Harvest Specifications Final Environmental Impact Statement Supplemental Information Report (NMFS 2019). Provides information on the effects of the groundfish fisheries on marine mammals and updates NMFS 2007. Available from <https://alaskafisheries.noaa.gov/sites/default/files/sir-pseis0219.pdf>.

Stock Assessment and Fishery Evaluation (SAFE) Report for the Groundfish Resources of the BSAI and GOA (NPFMC 2020).

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

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

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

Environmental Assessment/Regulatory Impact Review for Amendment 101 to the FMP for Groundfish of the GOA: Allow the use of pot longline gear in the GOA sablefish IFQ fishery (NMFS 2015).

The Amendment 101 EA analyzed proposed management measures that would allow a new gear type to harvest sablefish in the GOA. The Amendment 101 summarizes the evaluations rendered for fisheries, marine resources, and ecosystem components and is referenced in this EA. This document is available from: <https://www.fisheries.noaa.gov/action/amendment-101-fmp-groundfish-gulf-alaska-management-area>

Review of Gulf of Alaska Groundfish Fishery Management Plan Amendment 101 to Allow Pot Longline Gear in the Sablefish IFQ Fishery (NPFMC 2021).

This document reviewed the first 3-4 years of fishery data from the GOA sablefish pot fishery. This document is available from <https://meetings.npfmc.org/CommentReview/DownloadFile?p=1cee7277-52dc-405c-887b-c28d9d62ab92.pdf&fileName=D1%20GOA%20Sablefish%20Pots%20Report.pdf>

Environmental Assessment/Regulatory Impact Review for Amendment 118 to the FMP for Groundfish of the BSAI: Retention of Halibut in Pot Gear (NPFMC 2019).

This document analyzed proposed management measures under BSAI Amendment 118 to authorize the retention of legal-size halibut in pot gear in the BSAI, provided the operator holds sufficient halibut IFQ or CDQ for that IFQ regulatory area. This document is available from <https://www.fisheries.noaa.gov/resource/document/final-ea-rir-proposed-amendment-118-fishery-management-plan-groundfish-bering-sea>

5.1.2. Analytical Method

Table 5-1 shows the components of the human environment and whether the proposed action and its alternatives have the potential to impact that resource component and thus require further analysis. If there is a potential the proposed action may have an effect on the components of the human environment, that effect is examined more thoroughly in the corresponding section. Extensive environmental analysis on all resource components is not needed in this document, because the proposed action is not anticipated to have environmental impacts on all resource components. Additionally, not all elements of the proposed action are anticipated to result in environmental impacts.

Table 5-1 Resources potentially affected by the proposed action and alternatives.

	Potentially affected resource component							Social and economic
	Sablefish	Halibut	Incidental Catch	Marine Mammals	Seabirds	Habitat	Ecosystem	
Alt 2	Y	Y	Y	Y	N	N	N	Y
Alt 3	N	N	N	N	N	N	N	Y

The effects of the action alternative on the resource components would be caused by the following:

- any change in gear design (e.g., the biodegradable panel) that alters the ability of organisms to escape from pots that are lost and result in ghostfishing;
- changes in effort (i.e., amount of gear (the number of pots used, number of fishing lines in the water column), time on the ground) to harvest target species;
- changes in catch composition and size selectivity of gear; and

The socioeconomic environment may be affected by increased operational efficiency in harvesting halibut and sablefish IFQ (e.g., catch per unit effort, less time required to catch quota) if any of the flexibilities afforded through this action are utilized. These issues are further discussed in the RIR (Section X).

The extent of impacts depends on the magnitude of any shift in effort, in terms of the amount of halibut harvested with pot gear, the number of vessels shifting gear types, and the extent to which the fishery changes (e.g., designing new pot gear and moving to new fishing grounds versus retaining halibut incidentally in the existing sablefish fishery). Sections 3 and 4.7 describe the analytical approach and expected magnitude of change under the proposed action. It is difficult to accurately estimate the specific number of vessel operators that would switch to pot gear from HAL gear as a direct result of this action. Whale depredation is increasing for HAL fishermen, which would be a reasonable justification for switching to pot gear to target halibut. The number of vessels over 50 ft LOA that are active in the HAL halibut IFQ fishery on average (year to year) is 64. Thus, while there is uncertainty in the number of vessels that may switch to pot gear, the analysts expect it to be substantially less than the average 64 vessels greater than or equal to 50 ft LOA that typically fish in the BSAI with HAL gear. **This expected magnitude of effort shifting from the halibut HAL fishery to a targeted halibut pot fishery framed the analysis of environmental impacts for this action.**

Alternative 2 has the potential to affect sablefish, halibut, incidental catch, marine mammals, and social/economic components. Descriptions of Elements 1 and 4 of Alternative 2 are included in Sections 5.2.1 and 5.2.2, respectively. The background included in those sections provides the necessary information to understand the impacts of each of those elements on resource components. Section 4.7.5 provides background on Elements 5 and 6 with which environmental effects of these elements are analyzed in the EA. Effects of Element 1, the biodegradable panel, are included within Section 5.2.1 and are not repeated in each resource component section, as environmental impacts as a result of this element are uncertain but likely to be similar across the potentially affected resource components. The status of each resource component and the effects of the rest of the elements specific to each resource component are then included in the appropriate sections following (ex: Section 5.3.1.1 for status of halibut stock, Section 5.3.3 for effects specific to halibut).

Element 2, which is proposed to revise the buoy and flagpole requirements on pot gear used to fish IFQ in the GOA, is not expected to have significant impacts on resource components other than social/economic, which are analyzed in Section 4.7.2 of the RIR. Environmental impacts related to Element 2 would be dependent upon any changes in the number of fishing lines in the water, and due to the way in which buoys are marked and configured, the number of lines in the water would not change under this element. Therefore, there are no expected environmental impacts of Element 2 across resource components.

Beneficial but de minimus impacts are expected on seabirds under Alternative 2. The proposed action would not significantly change when or where the fishery operates, and current seabird avoidance measures and seabird breeding areas described in previous documents (above) would not be changed by Alternative 2. USFWS 2003 and USFWS 2015 determined that groundfish fishing activities by vessels using pot gear are not likely to adversely affect the short-tailed albatross and Steller's eider. While Alternative 2 could allow a newly authorized gear type for the harvest of IFQ sablefish under Element 3 (jig gear), this gear type is already used for halibut and other groundfish such as cod in the action areas and has a limited impact on non-target species. The effects of this gear on seabirds have been assessed in NMFS 2004 and jig gear is known as a relatively clean gear type. Additionally, while Alternative 2 could allow more pots on the grounds (under Element 5) and pot gear to be on the grounds in the GOA for a longer period of time (Element 6), previous documents have already analyzed the effects of pot gear on seabirds. As analyzed in NPFMC (2016), any shift in effort from HAL gear to pot gear that occurs from this action would potentially have beneficial, but de minimus impacts on seabirds compared to the status quo, due to the differences in seabird bycatch occurrences by the gear types.

Effects of the action on habitat are expected to be de minimus because none of the alternatives would significantly change when or where the fishery operates, and impacts of existing gear types on habitat have been analyzed. The Groundfish PSEIS (NMFS 2004) contains a discussion of the effects of fishing, including pot and jig, gear on habitat. The effects of current fishing regulations on habitat have been described in previous documents (Section 5.1.1). The 2005 EFH FEIS, 2010 EFH Review, and 2015 EFH Review concluded that current fishery regulations do not have long-term effects on habitat, and any expected impacts are determined to be minimal and not detrimental to fish populations or their habitats (NMFS 2017).

Neither of the alternatives would change current EFH conservation and protection measures including restrictions or prohibiting bottom contact gears.⁴⁹ IFQ is assigned to a specific regulatory area in which it must be fished and may be fished only within set fishing seasons. Any change in effort in the pot fishery is likely to be minimal (as described in Section 4.7) and impacts on habitat due to potential changes in effort are likely to be incremental but the full extent of impacts is unknown. Any increase in pot fishing is

⁴⁹ The use of bottom contact gear is prohibited in the Gulf of Alaska Coral and Alaska Seamount Habitat Protection Areas year-round.

not likely to disturb deep sea corals or sponges, particularly due to the low concentrations of deep-sea corals (Goddard et al. 2016; MacLean, Rooper & Sigler 2017).

EFH provisions in FMPs must be reviewed every 5 years and revised, if necessary (NMFS AKR 2005). The most recent year that an EFH Review was completed was in 2017 (NMFS 2017). No effects more than minimal or not temporary were found for Essential Fish Habitat (EFH) from commercial fishing activity on species in the BSAI or GOA (NMFS 2017). Pot and longline gears tend to have the least effect on habitat due to the smaller footprint of the gears.⁵⁰ The jig fisheries have no direct contact with the seafloor, although contact may occur incidentally (cite). Any changes in fishing effort may lead to incremental but unknown effects on EFH or habitat, however, given the minimal increase in pot gear effort expected from this action and the best available information, it is unlikely that this action would have significant impacts on EFH beyond the status quo.

Furthermore, the likely effects on coral from HAL longline gear and pot longline gear are reported to be similar, although no side-by-side comparisons have been done (NPFMC 2016). Most sablefish and halibut IFQ fishermen are knowledgeable of the location of coral areas and strive to minimize gear damage/loss and increase their catch. None of the alternatives, including the preferred alternative, would change TAC amounts, methods, seasons, or areas closed to trawling.

No significant effects are presumed for other ecosystem components because current or proposed fishing regulations, harvest limits, and habitat protections as described in previous NEPA documents (in Section 5.1.1) would not be changed by either of the alternatives.

Additionally, no effects are expected on resource components other than social/economic under Alternative 3. No effect is presumed for these components because the proposed action under Alternative 3 would not significantly change when or where the fishery operates. IFQ is assigned to a specific regulatory area in which it must be fished. Additionally, current fishing regulations (e.g., season and gear types), harvest limits, and regulations protecting habitat and important breeding areas as described in previous NEPA documents (above) would not be changed by Alternative 3. Alternative 3 would not change the methods, seasons, closed areas, nor the overall amount of harvest allowed. As a result, further analysis is included only for social and economic components under Alternative 3. These social and economic components are analyzed in the RIR (Section 4.8).

This EA analyzes the potentially affected environment and the degree of each of the effects of each alternative and the effects of past, present, and reasonably foreseeable future actions (RFFA). Based on Table 5-1, the resources with potentially meaningful effects are sablefish, halibut, incidental catch, marine mammals, and social/economic components. The effects on the other resources have been analyzed in numerous documents and the impacts of the proposed action alternatives on those resources is minimal, therefore there is no need to conduct an additional impacts analysis for those resources on the effects of past, present, and RFFA.

Each section below provides a review of the relevant past, present, and RFFA that may result in reasonably foreseeable future effects on the resource components analyzed in this document. A complete review of the past, present, and RFFAs are described in the prior NEPA documents incorporated by reference and the supplemental information report (SIR) NMFS prepares to annually review of the latest information since the completion of the Alaska Groundfish Harvest Specifications EIS. SIRs have been developed since 2007 and are available on the NMFS Alaska Region website. Each SIR describes changes to the groundfish fisheries and harvest specifications process, new information about environmental components that may be impacted by the groundfish fisheries, and new circumstances, including present and reasonably foreseeable future actions. NMFS reviews the reasonably foreseeable

⁵⁰ Personal communication with John Olson, NMFS Habitat Conservation Division. (cite doc this is from)

future actions described in the Harvest Specifications EIS each year to determine whether they occurred and, if they did occur, whether they would change the analysis in the Harvest Specifications EIS of the impacts of the harvest strategy on the human environment. In addition, NMFS considered whether other actions not anticipated in the Harvest Specifications EIS occurred that have a bearing on the harvest strategy or its impacts. The SIRs provide the latest review of new information regarding Alaska groundfish fisheries management and the marine environment since the development of the Harvest Specifications EIS and provide reasonably foreseeable future effects information applicable to the alternatives analyzed in this EA.

Actions are understood to be human actions (e.g., a designation of northern right whale critical habitat in the Pacific Ocean), as distinguished from natural events (e.g., an ecological regime shift). CEQ regulations require consideration of actions, whether taken by a government or by private persons, which are reasonably foreseeable. This requirement is interpreted to indicate actions that are more than merely possible or speculative. In addition to these actions, this analysis includes the effects of climate change.

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

5.2. Additional Background for Effects Analysis of Select Alternative 2 Elements

5.2.1. Slinky Pots and Biodegradable Escape Panel (Element 1)

Alternative 2, Element 1 proposes that regulations be revised to allow the use of biodegradable twine in the door latch or pot tunnel. Section 4.7.1 includes a description of the proposed element, context of the issue, and potential socioeconomic impacts.

A concern noted in the GOA Sablefish Pots review (NPFMC 2021) surrounding this type of pot gear and the biodegradable latch method (shown in Figure 4-9 and Figure 4-10) was that slinky pots are configured differently from traditional square pots and it was uncertain whether the door will actually fall open (which would depend on how the pot lands on the seafloor). However, these pots roll and move along the seafloor in such a way that it is unlikely that the door would be blocked for any significant period of time.⁵¹ Therefore, scientists at AFSC responded that the issue is less about how the pot lands on the seafloor and more about the method used to tie the door shut, and ensuring that a latch or panel would break in such a way that fish and other organisms could escape.⁵² It has been noted that as designed, if the twine holding the door shut does break, the opening created by the door is much larger than the opening created by the twine/panel shown in Figure 4-11, allowing trapped organisms to escape with more ease than through a smaller opening.

Ghost fishing occurs when gear is lost or abandoned due to weather, tides, gear malfunctions, abandonment, or other factors and continues to trap marine organisms without direct human influence (Bullimore et al 2001). The relative scale of direct population-level impacts to the target organisms depends on the frequency of gear loss, duration of ghost fishing (escape mechanisms), and the potential for 'perpetual baiting via the ongoing cycle of capture, decay and attraction' (Uhlmann et al. 2015). Ghostfishing can occur for several years after a pot is lost due to the durability of manufactured gear.

⁵¹ personal communication, J. Sullivan, AFSC ABL, August 2021

⁵² Ibid.

However, current regulations require a biodegradable panel which may reduce the potential for ghostfishing by providing a time-release mechanism for escapement. The efficacy of this escapement mechanism is not well understood. To date, the only comprehensive study on No. 30 untreated cotton twine in pot fisheries was conducted on the Aleutian Islands Golden King Crab fishery (see ADF&G 2008). The study found that No. 30 cotton twine has a mean time for failure of 44 days when used in similar conditions to fish for crab (ADF&G 2008). The escape mechanism requirement for shellfish and bottomfish (groundfish) pots in AK State fisheries is similar to the current federal regulation for groundfish pots: a sidewall, which may include the tunnel, of all shellfish and bottomfish pots must contain an opening equal to or exceeding 18 inches in length (5 AAC 39.145). The effectiveness of biodegradable panels currently required in regulation on reducing ghostfishing impacts are relatively unknown, therefore, the analysts provide a qualitative description of potential impacts in relation to the unknown status quo impact.

Under the status quo, if pots are lost, then they have the potential to ghostfish (Matsuoka et al. 2005). If fish are unable to escape (i.e. if the biodegradable panel fails to release or does not release in time for an organism to survive), they are assumed to have 100% mortality (Bullimore et al. 2001). Any changes in the biodegradable panel that would increase the likelihood that organisms in the pot cannot escape would increase the magnitude of the impact on populations of any organisms caught in the pot. Any impacts of Element 1 would be experienced across resource components, specifically target and non-target species, as it is uncertain which organisms would be subject to ghostfishing. If the biodegradable twine were tied in such a way that it would maintain the same breaking strength as the biodegradable panels tied into the mesh of other pots (status quo), impacts to resource components are expected to be minimal as compared with the status quo. **Scientists at AFSC have recommended that for optimal performance, there should only be two knots (one at each end of the <= 30 count untreated cotton twine) and the lacing should not overlap in any area (only single wraps, no double wraps).**⁵³

As with the status quo, impacts of Element 1 depend on factors such as the number of lost pots and the rate at which the No. 30 cotton twine degrades (otherwise the pot would be ghostfishing). Table 5-2 includes a summary of the Prior Notice of Landing (PNOL) data for number of pots set and pots lost from 2017 to 2020 in the BSAI and GOA.⁵⁴ This could be used as a maximum number of pots that *could* have been ghostfishing during this time *if the biodegradable panels failed to release*. In the GOA between 2017 and 2020, 1,436 pots were reported as lost on the PNOL. In the BSAI between 2017 and 2020, 280 pots were reported as lost on the PNOL. Across both the BSAI and GOA, 2018 saw the highest proportion of pots lost relative to pots set.

⁵³ Personal communication, J. Sullivan, August 2021.

⁵⁴ Vessel operators using longline pot gear in the GOA IFQ sablefish fishery must maintain logbooks and use VMS. Operators must also self-report on the Prior Notice of Landing (PNOL) the number of pots deployed (pots set), the number of pots lost (if applicable), and the number of pots left deployed on the fishing grounds after a landing is reported (pots soaking). When a vessel submits their PNOL, they are required to identify the IFQ regulatory area(s) in which the IFQ sablefish was harvested (50 CFR 679.5(I)(1)(iii)(F)).

Table 5-2 Summary of pots lost by year and area as reported on the PNOL. Percent pots lost is a proportion of the number of pots lost to the number of pots set.

GOA			
Year	# pots set	# pots lost	% pots lost
2017	37,190	167	0.45
2018	40,353	297	0.74
2019	55,122	267	0.48
2020	165,395	705	0.43
BSAI			
2017	25,637	59	0.23
2018	28,616	114	0.40
2019	19,107	56	0.29
2020	19,730	51	0.26

SOURCE: NMFS (PNOL for GOA IFQ sablefish lost pot data by year, month, area; BSAI IFQ sablefish lost pot data by year, month, area)

NMFS interpreted the motion as only applying to IFQ sablefish so that the regulatory change would add a paragraph to the existing definition of pot gear that would allow the door latch to be used as an acceptable alternative for a biodegradable panel when using slinky pots. The magnitude of any population-level impacts would depend upon the number of pots that use this method, and whether this method reduces ghost fishing to the same extent as the current biodegradable panel. Currently, there is no way to distinguish the number of slinky pots being deployed in the IFQ fisheries; further discussion of monitoring and reporting related to slinky pots is included in Section 4.9.

Furthermore, the addition of escape rings (described in Section 5.2.2) on pots may alleviate some of the impacts of ghost fishing for organisms that are small enough to fit through the rings. Escape rings reduce catch rates of small fish while maintaining catch rate of larger fish. Escape rings are currently not required by regulation on pots used in the IFQ fisheries, though they are often used by participants.

For the reasons mentioned above, the effects of Element 1 are not directly quantifiable but are expected to be minimal or within a comparable range as is assumed under the status quo alternative. Given that Element 1 proposes a larger escape panel than what is currently required, it is possible that impacts to resource components may actually be reduced under this alternative. Ultimately, the impacts of ghost fishing will depend on the rates of lost gear, coupled with the efficacy of the escape panel. Although limited research exists to quantify impacts under the status quo or Element 1 alternatives, studies have shown that proper installation (e.g. not double-wrapping the panel’s binding material or using multiple knots) and the use of the correct binding material (≤ 30 count untreated cotton twine) are significant predictors for escape panel success.^{55,56}

⁵⁵ Araya-Schmidt, T. and Queirolo, D., 2019. Breaking strength evaluation of biodegradable twines to reduce ghost fishing in the pot and trap fisheries of Chile. *Latin American Journal of Aquatic Research*, 47(1), pp.201-205.

⁵⁶ J. R. Scarsbrook, G. A. McFarlane & W. Shaw (1988) Effectiveness of Experimental Escape Mechanisms in Sablefish Traps, *North American Journal of Fisheries Management*, 8:2, 158-161.

5.2.2. Tunnel Opening (Element 4)

Element 4 would remove the requirement for a 9-inch maximum width of tunnel opening in the GOA. Section 2.1 explains that certain vessels in the BSAI are exempt from this requirement. As described in Section 4.7.4, removing this requirement in the GOA would allow fishermen to target halibut (and potentially larger sablefish) more effectively. It is unclear whether all vessels in the GOA IFQ pot fishery will use this flexibility. Some vessels may choose to keep the 9" tunnel opening depending on the size catch they are targeting, in which case we would not expect to see much change from the status quo in terms of catch composition.

Regulations in the BSAI and GOA already allow retention of halibut in pots ([81 FR 95435](#); [85 FR 840](#)). Halibut quota holders can already use pot gear on a trip solely intended to harvest halibut, or on a mixed trip in which both halibut and sablefish are the intended target, provided the vessel has IFQ for the appropriate areas for both species. Based on Federal regulations at Section 679.7(f)(11), IFQ permit holders are prohibited from discarding halibut or sablefish caught with fixed gear for which they hold halibut or sablefish IFQ. Under Alternative 2, those who are fishing sablefish or halibut with pot gear would continue to be required to retain legal-size halibut for which they have the necessary IFQ.

It is unclear what size tunnel opening harvesters would use, especially given the variety of pot sizes used in the fishery. A significantly larger tunnel opening at some point requires larger pots, and there is likely a limit on how large a pot can be before it is no longer efficient to be fished.

A change in the size of the tunnel opening (Element 4) could affect catch composition, both in terms of size selectivity of the target catch (Section 5.3.3.2) and the amount and size of incidental catch (Section 5.4.2.2). Quantitative data on the size and species of fish that get harvested with different sizes of tunnel opening are not available, because there is no systematic data collection that distinguishes pots fished with different tunnel sizes. Therefore, the analysts provide a qualitative discussion on the potential impacts of changing tunnel size on target and incidental catch.

Escape rings, or metal rings secured to a pot's external mesh, offer a highly effective strategy to avoid small fish when pot fishing (Haist et al. 2000; Haist and Hilborn 2000). Escape mechanisms are broadly used in pot/trap fisheries due to their efficacy in reducing bycatch and incidental catch of unmarketable size classes. A recent study in Chatham Strait, Alaska compared 3.5", 3.75", and 4" escape rings using conventional pot gear and found 3.5" escape rings effectively reduced catch rates of small fish while maintaining catch rates of large fish (Figure 5-1). The 3.75" and 4" rings further reduced catch rates of small fish but at the cost of a detectable reduction in catch rates of larger fish. Escape rings could allow certain sized organisms to escape, ultimately reducing the magnitude of potential impacts on incidental catch.

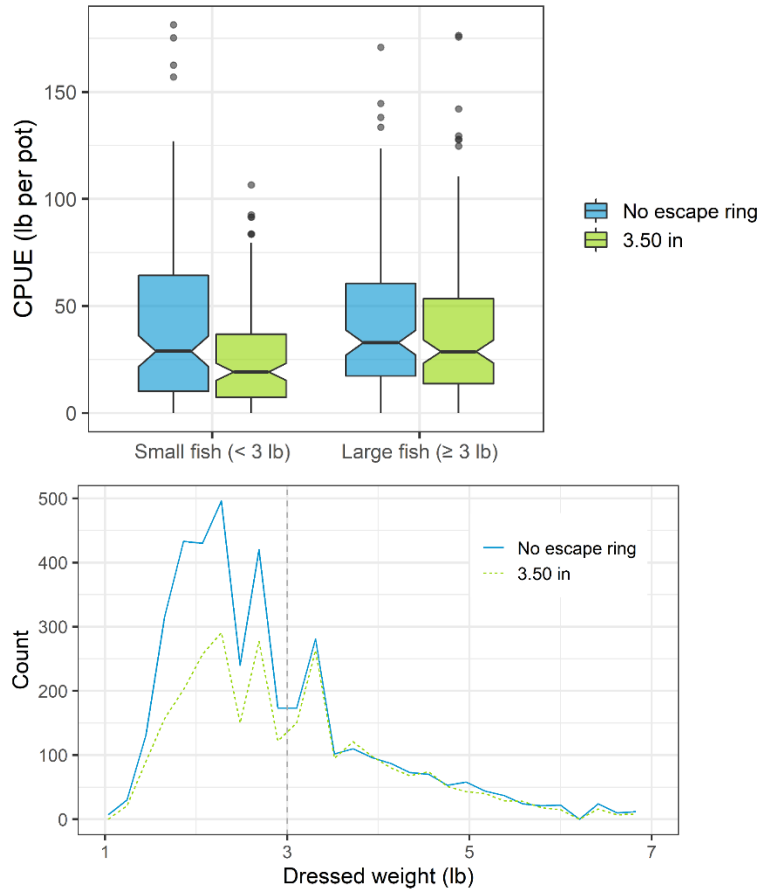


Figure 5-1 Catch per unit effort (CPUE; total dressed lb per pot) of all sizes of sablefish combined, small sablefish (< 3 dressed lb), and large sablefish (≥ 3 dressed lb) by escape ring treatment in May 2019, Chatham Strait, Alaska. The data are presented as notched boxplots; if the notches are not overlapping, it means the medians (50th percentile) between groups are significantly different. The Eastern cut dressed weight product recovery rate was assumed to be 0.63. Data courtesy of the Alaska Department of Fish and Game.

5.3. Target Species

Due to the nature of the IFQ fisheries and for the purposes of this analysis, halibut and sablefish are both considered target species. The status of and impacts to these stocks are included in the follow sections.

5.3.1. Halibut

Pacific halibut (*Hippoglossus stenolepis*) is one of the largest species of flatfish in the world, with individuals growing up to eight feet in length and over 500 lb. The range of Pacific halibut that the IPHC manages covers the continental shelf from northern California to the Aleutian Islands and throughout the Bering Sea. Pacific halibut are also found along the western north Pacific continental shelf of Russia, Japan, and Korea. The depth range for halibut is up to 250 fathoms (457 m) for most of the year and up to 500 fathoms (914 m) during the winter spawning months. Halibut also move seasonally between shallow waters and deep waters. Mature fish move to deeper offshore areas in the fall to spawn and return to nearshore feeding areas in early summer.

5.3.1.1. Status of the Stock

The IPHC assesses the coastwide biomass of halibut, including fish that are accessible in the IPHC setline survey and to the directed halibut fisheries (generally fish over 26 inches; O26). The IPHC estimates the distribution of the coastwide stock based on survey catch rate among IPHC management areas using information from its annual setline survey. Because the IPHC setline survey does not extend throughout the Bering Sea, IPHC staff use the eastern Bering Sea trawl and other surveys to extrapolate the IPHC setline results across Area 4CDE. Pacific halibut is modeled as a single stock extending from northern California to the Aleutian Islands and Bering Sea, including all inside waters of the Strait of Georgia and the Salish Sea, but excludes known extremities in the western Bering Sea within the Russian Exclusive Economic Zone.

The IPHC uses an ensemble approach to its coastwide stock assessment for the Pacific halibut stock, described in its assessment (IPHC 2020). In this approach, multiple models are included in the estimation of management quantities, and uncertainty about these quantities. For 2020, these included two coastwide models and two areas-as-fleets (AAF) models (fitting data disaggregated into four geographic regions), in each case one using more comprehensive data available only since 1992, and the other using the full historical record.

The estimated spawning stock biomass has been stable since 2010 following a considerable decline since the late 1990s (Figure 5-2). In recent years, the spawning biomass has been predicted to slightly decrease, even at low fishing levels, due to a lack of incoming recruitment. Weight-at-age is also a contributing factor to this decline because the average weight-at-age of Pacific halibut has been declining over this same period.

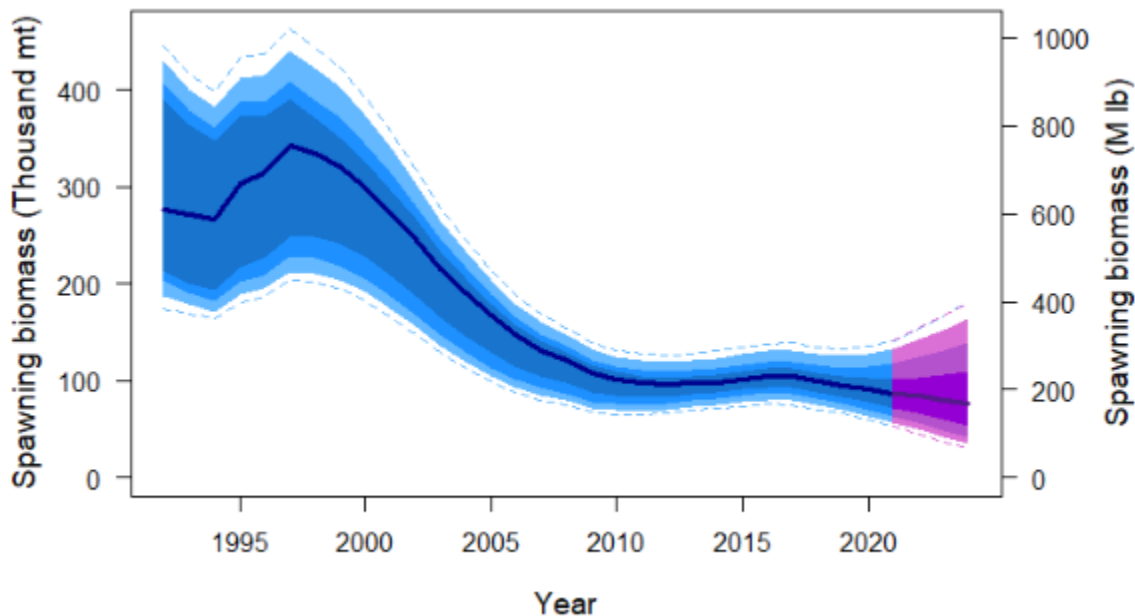


Figure 5-2 Estimated spawning biomass from the 2020 stock assessment ensemble (from Stewart & Hicks 2021) with a three-year projection (purple) based on a fishing intensity of FSPR=43% (TCEY=39.0 million pounds, ~17,690 t). Source: IPHC 2020.

The results of the 2020 stock assessment indicate that the Pacific halibut stock declined continuously from the late 1990s to around 2012. That trend is estimated to have been largely a result of decreasing size-at-age, as well as somewhat weaker recruitment strengths than those observed during the 1980s. The spawning biomass (SB) is estimated to have increased gradually to 2016, and then decreased to an

estimated 192 million pounds (~87,050 t) at the beginning of 2021, with an approximate 95% credible interval ranging from 125 to 292 million pounds (~56,800-132,600 t).

In general, recruitment has decreased substantially since the highs of the 1980s. Pacific halibut recruitment estimates show the large cohorts in 1999 and 2005. Cohorts from 2006 through 2010 are estimated to be much smaller than those from 1999-2005, which results in a high probability of near-term decline in both the stock and fishery yield as these low recruitments become increasingly important to the age range over which much of the harvest and spawning takes place. The 2011 and 2012 year-classes, estimated to be stronger than any since 2005, remain uncertain and are highly important to short-term projections of stock and fishery. The projected spawning biomass over the next 3 years includes the effects of these year classes maturing at ages 8-12 (IPHC 2020).

Since 2014, there is no information to suggest that halibut is subject to “overfishing,” as that term is commonly applied to stocks managed under the Magnuson-Stevens Act. The Halibut Act does not define “overfishing” or require that an overfishing limit be defined. However, the halibut stock is currently managed in a manner that is not likely to result in a chronic long-term decline in the halibut resource coastwide due to fishing mortality from all sources of removals. For more information on the status of the halibut stock, uncertainties in the assessment, and additional factors that may impact the overall stock status and harvestable surplus of abundance of halibut see IPHC (2020) and Hicks and Stewart (2017).

5.3.2. Sablefish

5.3.2.1. Status of the Stock

BSAI and GOA sablefish are managed as one population in Federal waters due to their highly migratory behavior during certain life history stages. The sablefish stock is assessed annually in the SAFE report (NPFMC 2020) and was also evaluated in the Alaska Groundfish Fisheries Harvest Specifications EIS (NMFS 2007a). The sablefish assessment is based on a statistical sex-specific age-structured model. This model incorporates fishery data and fishery independent data from domestic (AFSC longline survey, GOA trawl survey) and Japan-US cooperative longline surveys.

Sablefish (*Anoplopoma fimbria*) are managed under Tier 3 of NPFMC harvest rules. Reference points are calculated using the mean size of the 1977 – 2016 year classes. The updated point estimate of $B_{40\%}$, is 126,389 t. Since projected female spawning biomass (combined areas) for 2021 is 134,401 t (6% higher than $B_{40\%}$, or equivalent to $B_{42\%}$), sablefish is in sub-tier “a” of Tier 3. The updated point estimates of $F_{40\%}$ and $F_{35\%}$ from this assessment are 0.100 and 0.117, respectively. Thus, the maximum permissible value of F_{ABC} under Tier 3a is 0.100, which translates into a 2021 maximum permissible ABC (combined areas) of 52,427t. The OFL fishing mortality rate is 0.117, which translates into a 2021 OFL (combined areas) of 61,319 t. Biomass-based reference points have increased by 20% from 2019. The main factor driving these changes is the incorporation of the strong 2016 year class in the calculation of reference points for 2020, which was not incorporated in the 2019 estimate of average recruitment. It is likely that a similar pattern will occur in the next assessment, because the 2017 year class is estimated to be large, which will further increase the average recruitment used to determine reference points. Thus, relative stock status estimated in the model year 2021 stock assessment will likely decline due to further increases in the $B_{40\%}$ reference point. However, current model projections indicate that the Alaskan sablefish stock is not subject to overfishing, not overfished, and not approaching an overfished condition.

SSB has lagged recent increases in biomass due to these increases consisting of primarily young, immature fish (Figure 3.17). SSB continued to decline to a time series low of 65,000 t in 2018 before rapid, albeit not as drastic as for biomass, rebuilding (Table 3.14; Figure 3.17). The SSB in 2020 was estimated to be at 94,000 t, which is on par with recent time series highs in the late 2000s, though much below true time series highs in the late 1960s around 240,000 t (Figure 3.17).

Unfished spawning biomass is estimated to be 317,000 t, while $B_{40\%}$ is 126,389 t. Terminal spawning biomass is estimated to be at 30% of unfished spawning biomass, while the projected 2021 spawning biomass is estimated to increase rapidly to around 42% of unfished spawning biomass. If projected increases in spawning biomass come to fruition, it would represent a doubling in relative SSB from a time series low of 21% of unfished biomass in 2018. The previous two above-average year classes, 2000 and 2008, each comprise approximately 4% and 5.5% of the projected 2021 spawning biomass, respectively (Figure 3.19). These two year classes are fully mature. The large estimated year classes for 2014 and 2016 are expected to comprise about 27% and 22% of the 2021 spawning biomass, whereas the similarly large 2017 year class is estimated to contribute only 6% of the projected SSB. The 2014 year class will be about 60% mature, the 2016 year class will be less than 20% mature, and the 2017 year class is only around 8% mature in 2021.

Large estimated 2014-, 2016-, and 2017-year classes (Figure 5-3) have caused estimates of total biomass to increase rapidly since 2015 to a time series high in 2020. Based on partitioning using survey RPWs, biomass has been historically located in the Central GOA and BSAI. Recent increases appear to be occurring in all areas but are predominantly driven by extreme spikes in the areas of historical biomass concentrations (i.e., Central GOA and BSAI).

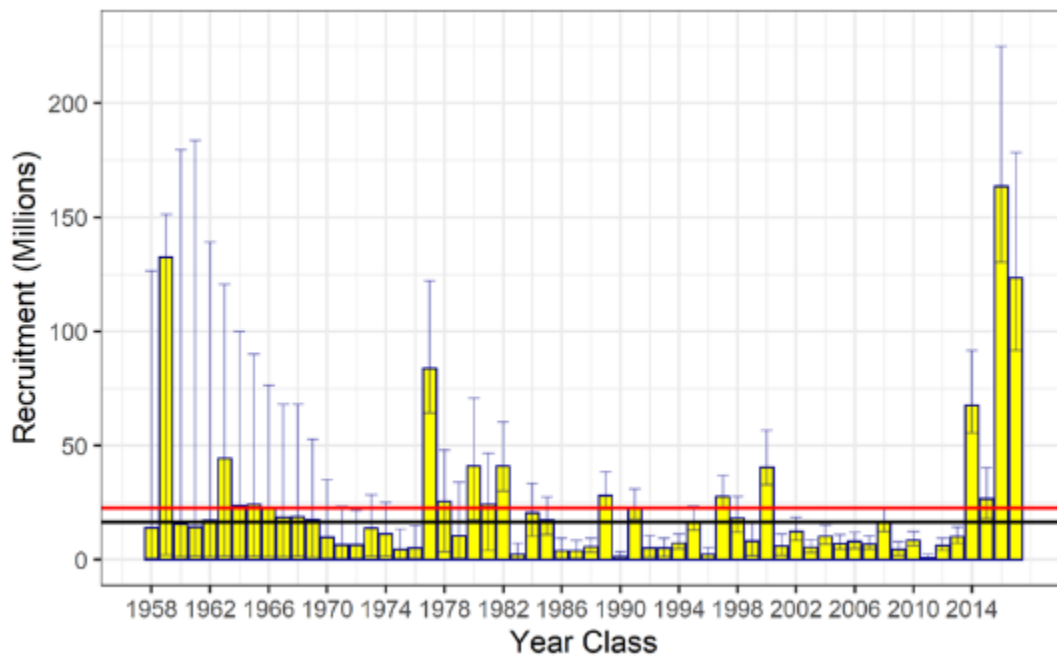


Figure 5-3 Estimated recruitment of age-2 sablefish (millions of fish) with 95% credible intervals from MCMC by year class (recruitment year minus two). Red line is overall mean, while black line is recruitments from year classes between 1977 and 2017.

5.3.3. Effects of the Alternatives

The effects of the proposed alternatives in the IFQ and CDQ fisheries in the BSAI and GOA are addressed here. Table 5-3 describes the criteria used to determine whether the impacts on the halibut and sablefish stock are likely to be significant.

The effect of the commercial and other fisheries capturing halibut on the halibut stock is assessed annually, and reported for the IPHC’s Interim and Annual Meetings, with the most recent summary in January 2021 (IPHC 2020). The halibut stock is neither overfished nor subject to overfishing. Biomass levels are projected to decrease in the near future due to lower recent recruitment and continued low size-

at-age (ibid.). However, it is estimated that the halibut fishery under the status quo level of fishing intensity is sustainable. Under either alternative, IPHC harvest strategy policy will continue to account for all sources of mortality, and neither alternative is expected to affect the general spatiotemporal distribution of the halibut harvest due to regulatory areas and the regulated IFQ fishing season. For these reasons, impacts to the halibut stock are expected to be insignificant.

Similarly, the effect of the commercial fisheries on the sablefish stock is assessed annually in the SAFE report (NPFMC 2020) as described in the previous section and evaluated in the Alaska Groundfish Fisheries Harvest Specifications EIS (NMFS 2007a). Current model projections indicate that the Alaskan sablefish stock is not subject to overfishing, not overfished, and not approaching an overfished condition. Under either alternative, catch limits for sablefish will continue to account for sources of mortality, and neither alternative is expected to affect the general spatiotemporal distribution of sablefish harvest due to regulatory areas and the regulated IFQ fishing season. For these reasons, impacts to the sablefish stock are expected to be insignificant.

Table 5-3 Criteria used to determine significance of effects on target stocks.

Effect	Criteria			
	Significantly Negative	Insignificant	Significantly Positive	Unknown
Fishing mortality	Changes in fishing mortality are expected to jeopardize the ability of the stock to sustain itself at or above its MSST (minimum stock size threshold)	Changes in fishing mortality are expected to maintain the stock's ability to sustain itself above MSST	Changes in fishing mortality are expected to enhance the stock's ability to sustain itself at or above its MSST	Magnitude and/or direction of effects are unknown
Stock Biomass: potential for increasing and reducing stock size	Reasonably expected to jeopardize the capacity of the stock to yield sustainable biomass on a continuing basis.	Reasonably expected not to jeopardize the capacity of the stock to yield sustainable biomass on a continuing basis.	Action allows the stock to return to its unfished biomass.	Magnitude and/or direction of effects are unknown
Spatial or temporal distribution	Reasonably expected to adversely affect the distribution of harvested stocks either spatially or temporally such that it jeopardizes the ability of the stock to sustain itself.	Unlikely to affect the distribution of harvested stocks either spatially or temporally such that it has an effect on the ability of the stock to sustain itself.	Reasonably expected to positively affect the harvested stocks through spatial or temporal increases in abundance such that it enhances the ability of the stock to sustain itself.	Magnitude and/or direction of effects are unknown

5.3.3.1. Alternative 1

Under the no action alternative, pots in the GOA would still be required to have a 9” maximum tunnel opening, and effects on target species are minimal. Under either alternative, there will be vessels that continue to use HAL to harvest halibut and sablefish IFQ. However, under the status quo, the ability of vessels to target halibut (and larger sablefish) using pot gear is limited due to the tunnel maximum size requirement. Some unknown proportion of mortality will likely continue to be due to whale depredation, which represents a source of uncertainty in the assessments, as it is considered to be an unreported source of removals in the directed fishery. Sablefish mortality due to whale depredation of sablefish, while estimated in the assessment, is also a source of uncertainty. While this source of halibut and sablefish mortality, which occurs under the status quo, is not expected to maintain the ability of the stocks to sustain themselves above MSST, it is a source of mortality discussed in our effects of Alternative 2.

5.3.3.2. Alternative 2

As described in past analyses (NPFMC 2016, NPFMC 2019), it is understood that whales prey on halibut (and sablefish) in the HAL IFQ/CDQ fishery in the GOA and the BSAI. Some of this depredation of HAL gear may go unobserved, and this source of removals is not directly included in the halibut stock assessment. Pot gear is an effective gear at minimizing depredation because whales cannot remove fish enclosed in a pot when the gear is soaking. Thus, there may be some level of decreased halibut and sablefish mortality if any harvest of IFQ/ CDQ shifts to pot gear due to increased flexibility of gear designs (particularly halibut under Element 4), and whales are not able to prey on these fish.

NPFMC 2019, which focused on retention of halibut in pot gear in the BSAI, described that it was expected that the quantity of halibut likely to be landed using pots is likely to be small relative to the overall removals from the stock, particularly in the short term and would not include a demographic component (size or age) not already experiencing mortality in either non-halibut target fisheries or recreational fisheries. Further, the analysis noted, the IPHC's stock assessment allows for time-varying selectivity in the directed halibut fisheries, such that potential changes in size or age of halibut captured would be included in the estimates of fishing intensity (SPR), and therefore explicitly accounted for in the annual catch limit setting process (personal communication, I. Stewart 2018).

One impact to consider is how the increase in the use of pot gear also coincided with an increase in the prevalence of small fish due to a series of strong sablefish recruitment events (NPFMC 2020). As mentioned in Section 5.2.2, escape rings can mitigate some of the impacts of large amounts of small sablefish caught being in pot gear (unpublished data, Jane Sullivan, ABL, AFSC). In general, pots without escape rings tend to catch smaller sized sablefish. The use of escape rings shifts size selectivity of pot gear towards sizes that are comparable to hook-and-line gear.⁵⁷

Additional potential effects of the alternatives to those discussed in Section 4.2 include the following:

Effects of Element 1

The effects of Element 1, changes to the biodegradable panel, are considered in Section 5.2.1.

Effects of Element 2

No environmental impacts are expected as a result of Element 2 as noted in Section 5.1.2.

Effects of Element 3

Under Element 3, any target catch of sablefish with jig gear would be required to be retained if the vessel has the necessary IFQ. In recent years, sablefish fisheries have not been fully harvested (Figure 5-4). Therefore, there could be some increase in sablefish landings as a result of this action. However, sablefish harvests are limited both by the individual IFQs and TACs, and changes in sablefish harvest by jig gear would likely be a redistribution of effort from other gear types rather than overall changes in fishing mortality.

Harvest of halibut with jig gear is already legal in the BSAI and GOA, however it is possible that not all IFQ holders that intend to harvest sablefish IFQ using jig gear under this action would also hold halibut IFQ. In this case, any halibut caught on jig gear without the appropriate IFQ would need to be discarded. Observer data are not available on halibut bycatch in the existing jig gear fishery. However, NMFS estimates a negligible amount of halibut bycatch mortality because of the selective nature of jig gear and

⁵⁷ personal communication, J. Sullivan, August 2021

the low mortality rate of halibut caught with jig gear and released (86 FR 11449, February 25, 2021; 86 FR 10184, February 19, 2021). Halibut DMRs for all HAL gear (not jig gear specifically) is estimated at 9% in the BSAI and 13% for CVs in the GOA.

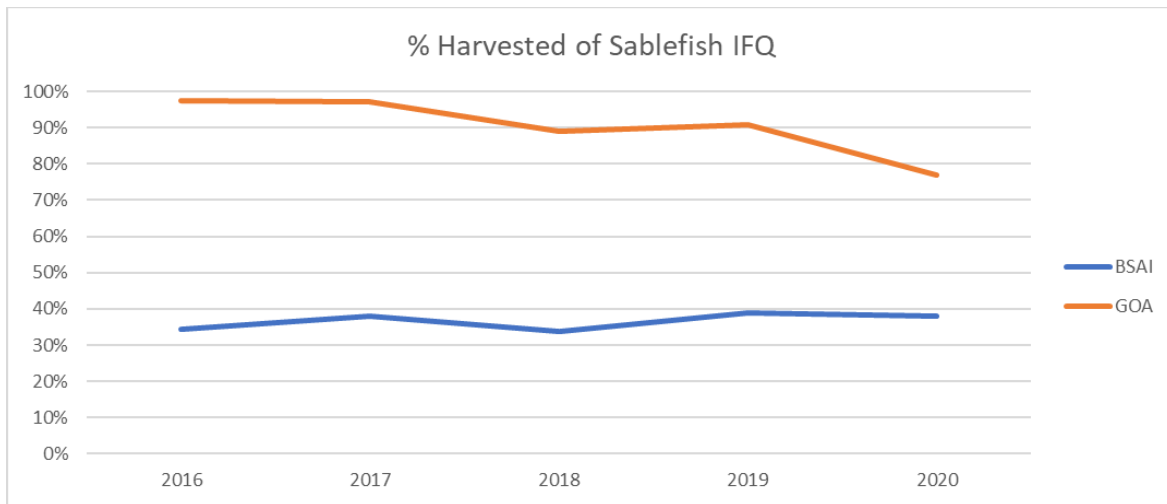


Figure 5-4 Percent of sablefish IFQ harvested in the GOA and BSAI, 2016-2020

Effects of Element 4

As discussed in Section 4.7.4, the 9-inch tunnel opening limits the ability of vessels to target halibut using pot gear, but does not entirely exclude all sizes of halibut from entering pots. In general, it would be expected that pot gear would catch smaller halibut on average than HAL gear (NPFMC 2021), however, changes to the size of the tunnel opening under Element 4 would likely increase the number of larger halibut caught as compared with the gear currently authorized (9-inch tunnel opening).

If the tunnel size used by IFQ fishermen increased under Element 4, it is expected that halibut catch, and the size of halibut caught in pots, may increase. However, because halibut fisheries in the GOA have generally been fully prosecuted, particularly in the GOA (Figure 5-5), this is likely to be redistribution of effort from targeting halibut using HAL gear rather than an actual increase in harvest. Furthermore, any increase in targeting of halibut (especially under Element 4) would not significantly increase overall fishing mortality because halibut harvests are limited by individual QS and overall catch limits (total constant exploitation yield (TCEY)) set by the IPHC. In fact, this alternative may lead to a possible reduction in halibut mortality from whales preying on halibut in the HAL fishery corresponding if a portion of halibut IFQ/ CDQ shifts to pot gear due to the flexibility afforded through Element 4.

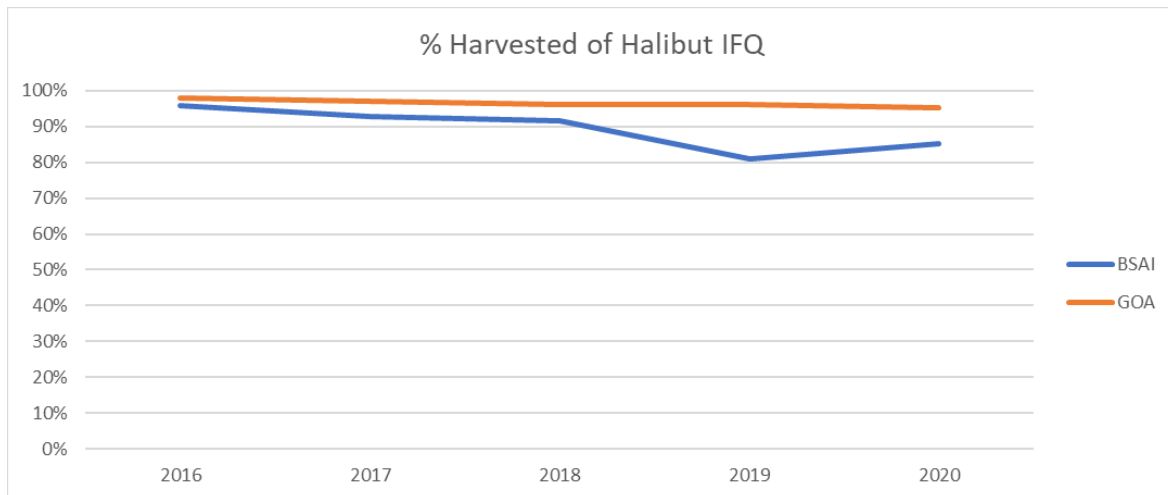


Figure 5-5 Percent of halibut IFQ harvested in Areas 2C and 3 (GOA) and Area 4 (BSAI), 2016-2020
 Source: NMFS Alaska Region (RAM) division IFQ landings database sourced through AKFIN

Sablefish fisheries in the GOA are not fully harvested. Therefore, sablefish mortality could increase under this action if an increased tunnel size leads to increased sablefish landings. However, sablefish harvests are limited both by limits on IFQ as well as by overall TAC. While dependent on several factors such as the depth at which gear is fished, if IFQ holders could target halibut with larger tunnel openings under this action, catch of larger sablefish also has the potential to increase.

Effects of Element 5 and 6

Any increase in pot limits or time gear may be on the grounds under Element 5 or 6 could increase how efficiently a vessel could harvest its IFQ. However, because harvest of halibut is limited by IFQ pounds and halibut IFQ is generally fully allocated and harvested each year, total mortality would not increase. Additionally, no information in this analysis suggests that a temporal or seasonal shift in sablefish or halibut IFQ fishing is expected to occur under Alternative 2.

Considering the potentially affected environment and the degree of the effects of the alternatives when added to the impacts of past and present actions previously analyzed in other documents that are incorporated by reference and the impacts of reasonably foreseeable future actions, the impacts of the proposed alternatives are considered to be not significant.

5.4. Non-target species/incidental catch

5.4.1. Status

There are a number of different terms referring to the incidental catch of species in fisheries of the EEZ. In this section we make the following distinctions: FMP-managed secondary species are groundfish species that do not dominate the catch but may, in some cases, be retained (some of these groundfish species may be retained up to a certain cap called a maximum retainable amount (MRA)). Non-target species are not managed under an FMP, including species such as sea stars and eelpouts for which there is no significant market and generally no retention. Incidental catch can also include Prohibited Species Catch (PSC), species for which there is a significant market, but retention is prohibited (with the exception of some non-market-based donation programs). Marine mammals and seabirds are not included in this non-target species/incidental catch category.

5.4.2. Effects of the Alternatives

5.4.2.1. Alternative 1

Under the no action alternative, the amount and composition of bycatch species in the sablefish and halibut IFQ pot fisheries would not be expected to change. These mortalities are accounted for in the management of the species under the GOA and BSAI Groundfish FMP, which is designed to prevent negative effects to groundfish stocks. Total catch of targeted groundfish is managed to prevent exceeding ABCs.

5.4.2.2. Alternative 2

Effects of Element 1

The effects of Element 1, changes to the biodegradable panel, are considered in Section 5.2.1.

Effects of Element 2

No environmental impacts are expected as a result of Element 2 as noted in Section 5.1.2.

Effects of Element 3

Section 4.7.3 explains how effort in a sablefish jig fishery would be expected to be minimal as result of this action. It is likely that jig gear would be used by few fishery participants for small amounts of sablefish quota. While a shift in gear types used for a target species may result in differences in catch composition, the selective nature of jig gear is not likely to have significant impacts on incidental catch species.

There are no data on incidental catch in sablefish targets using jig gear, however, composition of the cod target jig fishery demonstrates the minimal incidental catch of the gear type. Table 5-4 shows the catch composition of species managed under the Groundfish FMPs in cod target fisheries (HAL, jig, and pot) in 2020. None of these species are overfished nor are they experiencing overfishing. In the Pacific cod target fishery, pollock is the main nontarget interaction with jig gear and less than one ton of pollock was caught in 2020. Further information on these groundfish species and, for some, their directed fisheries can be found in the most recent GOA and BSAI Groundfish SAFE Reports. Nontarget and PSC data are not available for the jig fisheries, so no comparison can be made. True incidental catch composition of a sablefish target jig fishery may be more similar to that of the HAL sablefish IFQ fishery (Figure 5-6), but overall incidental catch is likely to be minimal. Additionally, any legal-sized halibut that are caught on jig gear are able to be harvested if the IFQ holder also has the appropriate halibut IFQ, potentially reducing the amount of discarded halibut.

Table 5-4 Catch composition of GOA FMP-managed groundfish in the cod target fisheries by gear type in tons and by percentage, 2020.

Species	HAL catch (t)	JIG catch (t)	POT catch (t)	HAL	JIG	POT
cod, Pacific (gray)	741	10	16,522	4%	0%	96%
octopus, North Pacific	1		648	0%	0%	100%
sculpin, other large	54		124	30%	0%	70%
sole, yellowfin	0		146	0%	0%	100%
sculpin, yellow irish lord	0		111	0%	0%	100%
skate, other	91			100%	0%	0%
flounder, arrowtooth	13		42	24%	0%	76%

groundfish, general	0		42	0%	0%	100%
rockfish, other	20		11	65%	0%	35%
halibut, Pacific	22	0	0	99%	1%	0%
sculpin, great	0		18	1%	0%	99%
pollock, walleye	1	1	16	3%	5%	92%
sablefish (blackcod)	13		3	79%	0%	21%
shark, spiny dogfish	11		1	91%	0%	9%
sculpin, general	0		7	1%	0%	99%
greenling, atka mackerel	0		7	0%	0%	100%
Kamchatka flounder	6		0	97%	0%	3%
skate, longnose	6			100%	0%	0%
skate, big	3			100%	0%	0%
sole, flathead	0		3	3%	0%	97%
rockfish, dusky	0	1	1	19%	40%	40%
sculpin, bigmouth	1		1	47%	0%	53%
sculpin, plain	0		1	4%	0%	96%
sole, rock	0	0	1	1%	0%	98%
rockfish, shortraker	1		0	100%	0%	0%
rockfish, black	0		1	7%	0%	93%
flounder, general			1	0%	0%	100%
rockfish, thornyhead (idiots)	0			100%	0%	0%
rockfish, northern	0		0	2%	0%	98%
rockfish, yelloweye (red snapper)	0	0	0	83%	17%	0%
rockfish, quillback	0	0		100%	0%	0%
rockfish, rougheye	0			100%	0%	0%
turbot, Greenland	0		0	99%	0%	1%
Pacific sleeper shark	0			100%	0%	0%
flounder, Alaska plaice	0			100%	0%	0%
sole, dover	0		0	1%	0%	99%
sole, rex	0		0	0%	0%	100%
rockfish, canary	0			100%	0%	0%
rockfish, silvergray	0			100%	0%	0%
rockfish, redbanded	0			100%	0%	0%
perch, Pacific ocean	0		0	8%	0%	92%
sculpin, warty	0			100%	0%	0%
flounder, starry	0		0	35%	0%	65%
rockfish, china	0			100%	0%	0%
rockfish, yellowtail	0	0		0%	100%	0%
rockfish, redstripe	0			100%	0%	0%
shark, other	0			100%	0%	0%
rockfish, harlequin	0			100%	0%	0%
Bering flounder	0			100%	0%	0%

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN in Comprehensive_BLEND_CA

Effects of Element 4

More selective targeting of halibut or larger sablefish in pots (under Element 4) could shift some effort from HAL to pot gear (described in Section 4.7.4). This may result in the incidental catch becoming more reflective of what has been seen in the sablefish pot fishery, with the caveat that gear targeting halibut may be fished at different depths or locations than gear targeting sablefish. NPFMC 2021 described this catch composition in the first three years of the GOA sablefish pot fishery (Figure 5-6). There could be a decrease (by some amount) of skates, rockfish, Pacific cod, and grenadier, which are typically caught on HAL, and less prevalent in pot gear.

Changes to the tunnel opening size further complicate potential impacts to incidental catch. As described in Section 5.2.2, a change in the size of the tunnel opening (Element 4) could affect the amount and size of incidental catch. Quantitative data on the size and species of incidental catch in pots with different tunnel opening sizes are not collected. Theoretically, a larger tunnel opening could increase the overall amount of larger bycatch. Catch composition would depend on a number of factors including the depth at which the pot is fished. Generally, it is expected that an increase in tunnel opening size could increase catch of flatfish species such as dover sole, arrowtooth flounder, and large shorttraker, though more data are needed to make a clear determination.⁵⁸ Escape rings (described in Section 5.2.2) could allow certain sized organisms to escape, ultimately reducing the magnitude of potential impacts on incidental catch.

In general, pot gear has less incidental catch than HAL gear, however, if a non-negligible amount of IFQ harvest shifts to the pot fishery, there could be a shift in the magnitude of bycatch, the size selectivity, and species composition of incidental catch.

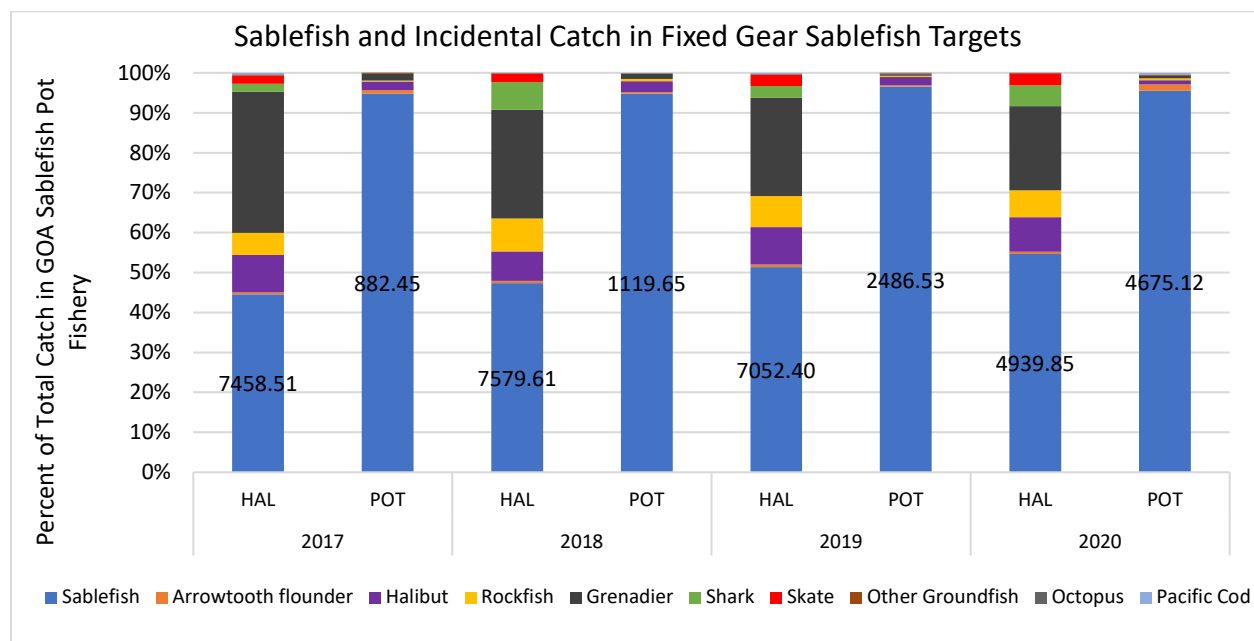


Figure 5-6 Sablefish and incidental catch in the sablefish HAL and pot gear, 2017-2020

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN

As described in NPFMC 2021, any tanner, snow or king crab caught in GOA sablefish pots must be discarded as PSC. PSC are reported by number of animals in Table 5-5; only tanner (*Chionoecetes bairdi*) and golden king crab (GKCR) have been observed in the GOA sablefish pot fishery. A shift in halibut harvest from HAL to pot gear, and an increase in the size of the tunnel opening, could increase

⁵⁸ Personal communication, C. Lunsford, AFSC ABL, 2021.

interactions with crab species. More data are needed to further analyze impacts of pots used in the IFQ fisheries in the GOA on crab, however it is anticipated that impacts as a result of this action would be minimal.

Table 5-5 Crab PSC in the GOA sablefish pot fishery, in numbers

YEAR	GEAR	BAIRDI	GKCR
2017	POT	0	0
2018	POT	48	0
2019	POT	200	92
2020	POT	98	39

Source: NMFS Alaska Region Catch Accounting System, data compiled by AKFIN

Effects of Elements 5 and 6

As described above, there is less incidental for pot gear compared to traditional HAL gear. Therefore, any further transition from HAL to pot gear we would expect to be accompanied by a corresponding shift in incidental catch composition to that of pot gear. In the GOA sablefish HAL fishery, the catch of non-sablefish species by number in HAL gear ranged from 38%-60% (mean = 48%) in GOA management areas between 2018 and 2020 (Figure 5-7). Non-target catch in the HAL fishery included grenadier, rockfish (e.g. shortspine thornyhead, shortraker, roughey and blackspotted rockfish), Pacific halibut, sharks, skates, and flatfish species. In contrast, non-target catch in the sablefish pot fishery is minimal, ranging from <1%-16% (mean = 7%) by number in GOA management areas between 2018 and 2020 (Figure 5-7). When bycatch does occur in pots, it is primarily rockfish, flatfish, and grenadier.

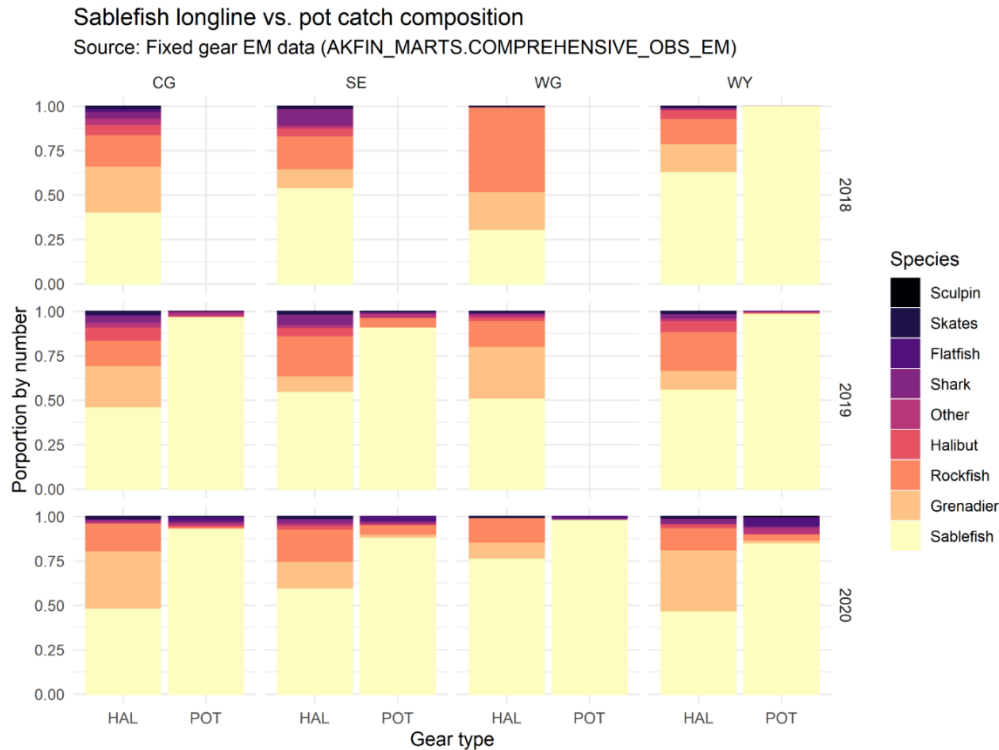


Figure 5-7 Species composition of IFQ sablefish catch in the GOA by management area and gear type.
 Source: AKFIN_MARTS.COMPREHENSIVE_OBS_EM, accessed July 13, 2021).

Considering the potentially affected environment and the degree of the effects of the proposed alternatives when added to the impacts of past and present actions previously analyzed in other documents that are incorporated by reference, the impacts of the proposed alternatives are considered to be not significant.

5.5. Marine Mammals

5.5.1. Status

Alaska supports one of the richest assemblages of marine mammals in the world. Twenty-two species are present from the order Carnivora, superfamilies Pinnipedia (seals, sea lions, and walrus), Ursoidea (polar bears), and Musteloidea (sea otters), and from the order Artiodactyla, infraorder Cetacea (whales, dolphins, and porpoises). Some marine mammal species are resident in waters off Alaska throughout the year, while others migrate into or out of Alaska fisheries management areas. Marine mammals occur in diverse habitats, including deep oceanic waters, the continental slope, and the continental shelf, including inshore waters. The NMFS maintains management authority for all marine mammal species in Alaska, while the U.S. Fish and Wildlife Service (USFWS) is the designated management authority for northern polar bears, Pacific walrus, and northern sea otter.

The Marine Mammal Protection Act, the Endangered Species Act, and the Fur Seal Act are the relevant statutes for managing marine mammal interactions with human activities, including commercial fishing operations. The Marine Mammal Protection Act (MMPA) was enacted in 1972 with the ideal of ensuring that marine mammal populations continue to be functioning elements of the ecosystems of which they are a part. One of the incentives for enacting the MMPA was to reduce take of marine mammals incidental to commercial fishing operations. While marine mammals may be lawfully taken incidentally in the course of commercial fishing operations, the 1994 MMPA Amendments established a requirement for commercial fishing operations to reduce incidental mortalities and serious injuries (M/SI) of marine

mammals to insignificant levels approaching a zero rate, commonly referred to as the Zero Mortality Rate Goal (ZMRG). ZMRG is considered to be met for a marine mammal stock when the M/SI level from all commercial fisheries is 10% or below the Potential Biological Removal level (PBR) of that marine mammal stock (69 FR 43338, July 20, 2004). Likewise, the Endangered Species Act (ESA) was enacted to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve such conservation. In practice, the ESA outlines a program to protect endangered species on the brink of extinction and threatened species that are likely to be on the brink of extinction in the near future and pursue their recovery. The ESA also requires designation of any habitat of endangered or threatened species, which is then considered to have physical or biological features essential to the conservation of the species and which may require special management considerations or protection.

Under the MMPA a “population stock” is the fundamental unit of legally-mandated conservation and is defined as “a group of marine mammals of the same species or smaller taxa in a common spatial arrangement, which interbreed when mature.” Stocks are identified in a manner consistent with the management goals of the MMPA which include 1) preventing stocks from diminishing such that they cease to be a significant functioning element in the ecosystem of which they are a part or below their optimum sustainable population keeping the carrying capacity of the habitat in mind; and 2) maintaining the health and stability of the marine ecosystem. Therefore, a stock is also recognized as being a management unit that identifies a demographically isolated biological population. While many types of information can be used to identify stocks of a species, it is recognized that some identified stocks may fall short of that threshold due to a lack of information.

Marine mammal Stock Assessment Reports (SARs) are published annually under the authority of the MMPA for all stocks that occur in state and federal waters of the Alaska region (NMFS 2016). Individual SARs provide information on each stock’s geographic distribution, population estimates, population trends, and estimates of the potential biological removal (PBR) levels for each stock. The SARs identify sources of human-caused mortality, including serious injury and mortality in commercial fishery operations, by fishery, and whether the stock has met ZMRG for all fisheries. The SARs also include the stock’s ESA listing status and MMPA depleted and strategic designations. Strategic stock SARs are updated annually (WDPS Steller sea lions, northern fur seals, bearded seals, ringed seals, Cook Inlet beluga whales, AT1 Transient killer whales, harbor porpoise, sperm whales, humpback whales (Western DPS and Mexico DPS), fin whales, North Pacific right whales, and bowhead whales). SARs for non-strategic stocks are updated every three years or when significant new information is available.

Under the ESA species, subspecies, and distinct population segments (DPS) are eligible for listing as a threatened or endangered species. The ESA defines a species as “any subspecies of fish or wildlife or plants, and any DPS of any species of vertebrate fish or wildlife which interbreeds when mature.” The joint USFWS /NMFS DPS policy (61 FR 4722; February 7, 1996) establishes two criteria that must be met for a population or group of populations to be considered a DPS: (1) The population segment must be discrete in relation to the remainder of the species (or subspecies) to which it belongs; and (2) the population segment must be significant to the remainder of the species (or subspecies) to which it belongs.

A population segment of a vertebrate species may be considered discrete if it satisfies either one of the following conditions: 1) it is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors; or 2) it is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the ESA. Significance determinations are made using available scientific evidence of the population’s biological and ecological importance to the taxon to which it belongs. This may include, but

is not limited to, one or more of the following: 1) persistence of the discrete population segment in an ecological setting unusual or unique for the taxon; 2) evidence that loss of the discrete population segment would result in a significant gap in the range of the taxon; 3) evidence that the discrete population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range; or 4) evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics. It is important to note that the MMPA stock designations and ESA DPS designations for a given species do not necessarily overlap due to differences in the defining criteria for each.

Marine mammals have been given various levels of protection under the current fishery management plans of the Council, and several species are the subjects of continuing research and monitoring to further define the nature and extent of fishery impacts on them. A number of conservation concerns and/or management determinations may be related to marine mammals and the potential impacts of fishing. For individual species, these concerns or determinations may include-

- Protection under the ESA:
 - listed as endangered or threatened
 - placed on NMFS' list of "species of concern" or designated as a "candidate species" for ESA listings;
- Protection under the MMPA:
 - designated as depleted or strategic;
 - focus of a Take Reduction Plan;
- Other:
 - declining or depressed populations in a manner of concern to State or Federal agencies;
 - large bycatch or other mortality related to fishing activities; or
 - vulnerability to direct or indirect adverse effects from some fishing activities.

The Alaska Groundfish Fisheries Programmatic Supplemental Environmental Impact Statement (PSEIS) (NMFS 2004) provides descriptions of the range, habitat, and diet for marine mammals found in waters off Alaska. The 2015 PSEIS Supplemental Information Report (NMFS 2015) provides updates on changes to marine mammal stock or species-related management and status, as well as new information regarding impacts on marine mammal stocks and new methods to assess impacts. The information from the PSEIS and the SARs is incorporated by reference.

Marine mammal stocks, including those currently listed as endangered or threatened under the ESA or depleted or strategic under the MMPA that may be present in the action area are listed in Table 5-6 (GOA), Table 5-7 (AI), and Table 5-8 (BS). ESA section 7 formal and informal consultations with respect to the actions of the Federal groundfish fisheries have been completed for all of the ESA-listed species, either individually or in groups (NMFS 2010 and NMFS 2014). Of the species listed under the ESA or stocks designated as depleted or strategic under the MMPA and present in the action area, several species may be more vulnerable than others to being adversely affected by commercial groundfish fishing. These include: Steller sea lions, Cook Inlet beluga whales, humpback whales, North Pacific right whales, northern sea otters, polar bears, bearded seals, and sperm whales.⁵⁹ Stocks designated as depleted or strategic under the MMPA, but not listed as threatened or endangered under the ESA, that may be vulnerable to being adversely affected by commercial groundfish fishing include northern fur seals, AT1 killer whales and Pacific walrus.⁶⁰

⁵⁹ Based on ESA listed status and having not met or an unknown ZMRG

⁶⁰ Based on MMPA depleted and strategic status

Table 5-6 Marine mammals that are known to occur in the Gulf of Alaska.

Infraorder or Superfamily	Species	MMPA Stock	ESA or MMPA Status	ZMRG Status (all fisheries)
Pinnipedia	Steller sea lion (<i>Eumatopias jubatus</i>)	Western U.S	Endangered, Depleted, Strategic	Not Met
		Eastern U.S.	None	Met
	Northern fur seal (<i>Callorhinus ursinus</i>)	Eastern Pacific	Depleted, Strategic	Met
	Harbor seal (<i>Phoca vitulina</i>)	Northern Kodiak	None	Met
		Southern Kodiak	None	Met
		Prince William Sound	None	Met
		Cook Inlet/Shelikof Strait	None	Met
		Glacier Bay/Icy Strait	None	Met
		Lynn Canal/Stephens Passage	None	Met
		Sitka/Chatham Strait	None	Met
		Dixon/Cape Decision	None	Met
		Clarence Strait	None	Met
		Ribbon seal (<i>Phoca fasciata</i>)	Alaska	None
Northern elephant seal (<i>Mirounga angustirostris</i>)	California***	None	Met	
Cetacea	Beluga whale (<i>Delphinapterus leucas</i>)	Cook Inlet (includes Yakutat Bay animals)	Endangered, Depleted, Strategic	Unknown****
	Killer whale (<i>Orcinus orca</i>)	Eastern North Pacific Northern Resident	None	Met
		Eastern North Pacific Alaska Resident	None	Met
		Eastern North Pacific GOA, Aleutian Islands, and Bering Sea Transient	None	Met
		AT1 Transient	Depleted, Strategic	Met
		West Coast Transient	None	Met
		Eastern North Pacific Offshore***	None	Met
		Pacific white-sided dolphin (<i>Lagenorhynchus obliquidens</i>)	North Pacific	None
	Harbor porpoise (<i>Phocoena phocoena</i>)	Southeast Alaska	None	Not Met
		Gulf of Alaska	None	Met
	Dall's porpoise (<i>Phocoenoides dalli</i>)	Alaska	None	Met
	Sperm whale (<i>Physeter macrocephalus</i>)	North Pacific	Endangered, Depleted, Strategic	Unknown*
	Baird's beaked whale (<i>Berardius bairdii</i>)	Alaska	None	Unknown*
	Cuvier's beaked whale (<i>Ziphius cavirostris</i>)	Alaska	None	Unknown*
	Stejneger's beaked whale (<i>Mesoplodon stejnegeri</i>)	Alaska	None	Unknown*
	Gray whale (<i>Eschrichtius robustus</i>)	Eastern North Pacific***	None	Met
	Humpback whale††† (<i>Megaptera novaeangliae</i>)	Western North Pacific‡	Endangered, Depleted, Strategic	Not Met
		Central North Pacific‡‡	Mexico DPS: Threatened, Depleted, Strategic‡‡ Hawaii DPS: None	Not Met
	Fin whale (<i>Balaenoptera physalus</i>)	Northeast Pacific	Endangered, Depleted, Strategic	Met
	Minke whale (<i>Balaenoptera acutorostrata</i>)	Alaska	None	Unknown*
North Pacific right whale (<i>Eubalaena japonica</i>)	Eastern North Pacific	Endangered, Depleted, Strategic	Unknown*	
Blue whale (<i>Balaenoptera musculus</i>)	Eastern North Pacific***	Endangered, Depleted, Strategic	Met	
Sei whale (<i>Balaenoptera borealis</i>)	Eastern North Pacific***	Endangered, Depleted, Strategic	Met	
Mustelidae	Northern sea otter (<i>Enhydra lutris</i>)	Southeast Alaska	None	Unknown**
		Southcentral Alaska	None	Unknown**

Sources: Muto et al 2019; Carretta et al 2019; List of Fisheries for 2019 (May 16, 2019 84 FR 22052)

*Unknown due to unknown abundance estimate and PBR.

**Unknown due to inadequate observer coverage.

*** This stock is found in the Pacific, rather than in the Alaska, SAR.

****Unknown due to lack of data on cause of death

† The Steller sea lion EDPS was removed from the ESA list of endangered and threatened wildlife on November 4, 2013.

†† On September 8, 2016, NMFS published a final decision revising the status of humpback whales under the ESA (81 FR 62259), effective October 11, 2016. In the 2016 decision, NMFS recognized the existence of 14 DPSs, classified several as endangered and one as threatened, and determined the remaining DPSs do not warrant protection under the ESA. Three DPSs of humpback whales occur in waters off the coast of Alaska: the Asia/2nd Western North Pacific (WNP) DPS (endangered), the Mexico DPS (threatened), and the Hawaii DPS, which is not protected under the ESA. Whales from these three DPSs overlap to some extent on feeding grounds off Alaska. As of October 2016, the MMPA stock designations of humpback whales found in Alaska have not been updated to reflect the newly-designated DPSs. Proposed critical habitat was published on October 9, 2019 (84 FR 54354).

‡ Corresponds to the new Asia/ 2nd WDPS (endangered)

‡‡ Includes the new Mexico (threatened) and Hawaii DPSs (not protected under the ESA).

Table 5-7. Marine mammals known to occur in the Aleutian Islands subarea

Infraorder or Superfamily	Species	MMPA Stock	ESA or MMPA Status	ZMRG Status (all fisheries)
Pinnipedia	Steller sea lion (<i>Eumatopias jubatus</i>)	Western U.S	Endangered, Depleted, Strategic	Not Met
	Northern fur seal (<i>Callorhinus ursinus</i>)	Eastern Pacific	Depleted, Strategic	Met
	Harbor seal (<i>Phoca vitulina</i>)	Aleutian Islands	None	Met
	Ribbon seal (<i>Phoca fasciata</i>)	Alaska	None	Met
	Northern elephant seal (<i>Mirounga angustirostris</i>)	California***	None	Met
Cetacea	Killer whale (<i>Orcinus orca</i>)	Eastern North Pacific Alaska Resident	None	Met
		Eastern North Pacific GOA, Aleutian Islands, and Bering Sea transient	None	Met
		Offshore***	None	Unknown*
	Pacific White-sided dolphin (<i>Lagenorhynchus obliquidens</i>)	North Pacific	None	Met
	Harbor porpoise (<i>Phocoena phocena</i>)	Bering Sea	None	Met
	Dall's porpoise (<i>Phocoenoides dalli</i>)	Alaska	None	Met
	Sperm whale (<i>Physeter macrocephalus</i>)	North Pacific	Endangered, Depleted, Strategic	Unknown*
	Baird's beaked whale (<i>Berardius bairdii</i>)	Alaska	None	Unknown*
	Cuvier's beaked whale (<i>Ziphius cavirostris</i>)	Alaska	None	Unknown*
	Stejneger's beaked whale (<i>Mesoplodon stejnegeri</i>)	Alaska	None	Unknown*
	Gray whale (<i>Eschrichtius robustus</i>) ***	Eastern North Pacific***	None	Met
	Humpback whale (<i>Megaptera novaeangliae</i>) †	Western North Pacific ‡	Endangered, Depleted, Strategic	Not Met
		Central North Pacific ‡‡	Mexico DPS-Threatened, Depleted, Strategic Hawaii DPS - None	Not Met
	Fin whale (<i>Balaenoptera physalus</i>)	Northeast Pacific	Endangered, Depleted, Strategic	Met
	Minke whale (<i>Balaenoptera acutorostrata</i>)	Alaska	None	Unknown*
North Pacific right whale (<i>Eubalaena japonica</i>)	Eastern North Pacific	Endangered, Depleted, Strategic	Unknown*	
Blue whale (<i>Balaenoptera musculus</i>)	Eastern North Pacific***	Endangered, Depleted, Strategic	Met	
Sei whale (<i>Balaenoptera borealis</i>)	Eastern North Pacific***	Endangered, Depleted, Strategic	Met	
Mustelidae	Northern sea otter (<i>Enhydra lutris</i>)	Southwest Alaska	Threatened, Depleted, Strategic	Unknown**

Sources: Muto et al 2019; Carretta et al 2019; List of Fisheries for 2019 (May 16, 2019 84 FR 22052)

*Unknown due to unknown abundance estimate and PBR.

** Unknown due to inadequate observer coverage;

*** This stock is found in the Pacific, rather than in the Alaska, SAR.

† On September 8, 2016, NMFS published a final decision revising the status of humpback whales under the ESA (81 FR 62259), effective October 11, 2016. In the 2016 decision, NMFS recognized the existence of 14 DPSs, classified several as endangered and one as threatened, and determined that the remaining DPSs do not warrant protection under the ESA. Three DPSs of humpback whales occur in waters off the coast of Alaska: the Asia/2nd Western North Pacific (WNP) DPS, which is endangered, the Mexico DPS, which is threatened, and the Hawaii DPS, which is not protected under the ESA. Whales from these three DPSs overlap to some extent on feeding grounds off Alaska. As of October 2016, the MMPA stock designations of humpback whales found in Alaska have not been updated to reflect the newly-designated DPSs.

‡ Corresponds to the new Asia/ 2nd WDPS (endangered)

‡‡ Includes the Mexico (threatened) and Hawaii DPSs (not protected under the ESA).

Table 5-8. Marine mammals known to occur in the Bering Sea.

Infraorder or Superfamily	Species	MMPA Stock	ESA or MMPA Status	ZMRG Status (all fisheries)
Pinnipedia	Steller sea lion (<i>Eumatopias jubatus</i>)	Western U.S	Endangered, Depleted, Strategic	Not Met
	Northern fur seal (<i>Callorhinus ursinus</i>)	Eastern Pacific	Depleted, Strategic	Met
	Harbor seal (<i>Phoca vitulina</i>)	Pribilof Islands	None	Met
	Ribbon seal (<i>Phoca fasciata</i>)	Bristol Bay	None	Met
		Alaska	None	Met
	Bearded seal (<i>Erignathus barbatus nauticus</i>)	Alaska ^a	Threatened, Depleted, Strategic	Met
	Spotted seal (<i>Phoca largha</i>)	Alaska ^b	None	Met
	Ringed seal (<i>Phoca hispida</i>)	Alaska ^c	Threatened, Depleted, Strategic	Met
	Pacific Walrus (<i>Odobenus rosmarus divergens</i>)	Alaska ^d	Strategic	Met
Cetacea	Killer whale (<i>Orcinus orca</i>)	Eastern North Pacific Alaska Resident	None	Met
		Eastern North Pacific GOA, Aleutian Islands, and Bering Sea transient	None	Met
		Offshore***	None	Unknown*
	Pacific White-sided dolphin (<i>Lagenorhynchus obliquidens</i>)	North Pacific	None	Met
	Harbor porpoise (<i>Phocoena phocaena</i>)	Bering Sea	None	Met
	Dall's porpoise (<i>Phocoenoides dalli</i>)	Alaska	None	Met
	Beluga whale (<i>Delphinapterus leucas</i>)	Beaufort Sea	None	Met
		Eastern Chukchi Sea	None	Met
		Eastern Bering Sea	None	Unknown*
		Bristol Bay	None	Unknown**
	Baird's beaked whale (<i>Berardius bairdii</i>)	Alaska	None	Unknown*
	Stejneger's beaked whale (<i>Mesoplodon stejnegeri</i>)	Alaska	None	Unknown*
	Sperm whale (<i>Physeter macrocephalus</i>)	North Pacific	Endangered, Depleted, Strategic	Unknown*
	Bowhead whale (<i>Balaena mysticetus</i>)	Western Arctic (Also known as Bering-Chukchi-Beaufort stock)	Endangered, Depleted, Strategic	Met
		Humpback whale (<i>Megaptera novaeangliae</i>) †	Western North Pacific ‡ Central North Pacific ‡‡	Endangered, Depleted, Strategic Mexico DPS-Threatened, Depleted, Strategic Hawaii DPS - None
	Fin whale (<i>Balaenoptera physalus</i>)	Northeast Pacific	Endangered, Depleted, Strategic	Met
Minke whale (<i>Balaenoptera acutorostrata</i>)	Alaska	None	Unknown*	
North Pacific right whale (<i>Eubalaena japonica</i>)	Eastern North Pacific	Endangered, Depleted, Strategic	Unknown*	
Blue whale (<i>Balaenoptera musculus</i>)	Eastern North Pacific***	Endangered, Depleted, Strategic	Met	
Mustelidae	Northern sea otter (<i>Enhydra lutris</i>)	Southwest Alaska	Threatened, Depleted, Strategic	Unknown**
Ursidae	Polar Bear (<i>Ursus maritimus</i>)	Chukchi/Bering Sea	Threatened, Depleted, Strategic	Unknown*

Sources: Muto et al 2019; Carretta et al 2019; List of Fisheries for 2019 (May 16, 2019 84 FR 22052)

* Unknown due to unknown abundance estimate and PBR.

** Unknown due to inadequate observer coverage or unreliable SI/M estimate.

*** This stock is found in the Pacific, rather than in the Alaska, SAR.

† On September 8, 2016, NMFS published a final decision revising the status of humpback whales under the ESA (81 FR 62259), effective October 11, 2016. In the 2016 decision, NMFS recognized the existence of 14 DPSs, classified several as endangered and one as threatened, and determined that the remaining DPSs do not warrant protection under the ESA. Three DPSs of humpback whales occur in waters off the coast of Alaska: the Asia/2nd Western North Pacific (WNP) DPS, which is endangered, the Mexico DPS, which is threatened, and the Hawaii DPS, which is not protected under the ESA. Whales from these three DPSs overlap to some extent on feeding grounds off Alaska. As of October 2016, the MMPA stock designations of humpback whales found in Alaska have not been updated to reflect the newly-designated DPSs.

‡ Corresponds to the new Asia/ 2nd WDPS (endangered).

‡‡ Includes the new Mexico (threatened) and Hawaii DPSs (not protected under the ESA).

^a Bearded seals: Two DPSs are identified for this subspecies, but only the Beringia DPS occurs in US waters. Therefore, the Alaska stock identified under the MMPA SAR consists entirely of the Beringia DPS. The Beringia DPS was most recently listed as threatened under the ESA in October 2016.. Critical habitat for the Beringia DPS was proposed in January 2021.

^b Spotted seals: Three DPSs are identified, but only the Bering DPS occurs in US waters. Therefore, the Alaska stock identified under the MMPA SAR consists entirely of the Bering DPS.

^c Ringed seals were listed as threatened under the ESA in December 2012. In March 2016 the U.S. District Court vacated the listing. In May 2016 NMFS appealed the March 2016 decision. Critical habitat for ringed seals was proposed in January 2021

^d Walrus – A petition to list walrus under the ESA was determined to be warranted, but precluded by higher priorities (76 FR 7634, February 10, 2011). The USFWS is under court order to make a decision on the listing in 2017. As of October 5, 2017, NMFS determined that listing is no longer warranted for the Pacific walrus.

The Alaska Groundfish Harvest Specifications EIS provides information on the effects of the groundfish fisheries on marine mammals (NMFS 2007), and has been updated with Supplemental Information Reports (SIRs) (NMFS 2019). These documents are also incorporated by reference. Direct and indirect interactions between marine mammals and groundfish fishing vessels may occur due to overlap in the size and species of groundfish harvested in the fisheries that are also important marine mammal prey, and due to temporal and spatial overlap in marine mammal occurrence and commercial fishing activities. The following discussion focuses on those marine mammals that may interact with or be affected by a jig fishery for sablefish in the GOA and/or BSAI (Element 3), or changes to pot limits or gear retrieval requirements in the GOA IFQ fisheries (Elements 5 and 6). This includes North Pacific Right Whales, sperm whales, and humpback whales, mainly due to entanglement concerns with gear.

North Pacific Right Whales

The right whale is listed as endangered under the ESA, and therefore designated as depleted under the MMPA. In 2008, NMFS relisted the North Pacific right whale as endangered as a separate species (*Eubalaena japonica*) from the North Atlantic species, *E. glacialis* (73 FR 12024, 06 March 2008). As a result, the stock is classified as a strategic stock. The abundance of this stock is considered to represent only a small fraction of its pre-commercial whaling abundance (i.e., the stock is well below its Optimum Sustainable Population). The estimated annual rate of human-caused mortality and serious injury is considered minimal for this stock (Muto et al., 2016). Potential threats to the habitat of this population derive primarily from commercial shipping and fishing vessel activity. There is considerable fishing activity within portions of the critical habitat of this species, increasing the risk of entanglement, although photographs of right whales taken to date have shown no evidence of entanglement scars; the sole exception is the animal photographed in the Strait of Juan de Fuca in October 2013 (Ford et al. 2016). Likewise, there have been no observed or reported interactions between fisheries and right whales (Muto et al 2021). There have been no observed or reported interactions between fisheries and right whales.

NMFS designated critical habitat for North Pacific right whales in areas that co-occur with groundfish fishing areas GOA in 2008. In 2006, NMFS recognized the potential for North Pacific right whales to be entangled in groundfish fishing gear given the overlap of right whale sightings and groundfish fishing areas (December 27, 2006, 71 FR 77694)). As mentioned above, NMFS PRD determined that the Alaska groundfish fisheries were not likely to adversely affect the North Pacific right whale. The NMFS PRD determination considered the probability of exposure as well as the probability of harm in reaching its “not likely to adversely affect” determination. If a right whale were to become entangled in fishing gear the probability of harm would be high given the critical status of the species. However, given the considerable amount of fishing effort in the North Pacific with no recorded interactions with right whales, and very few documented sightings of right whales in waters off Alaska, NMFS PRD concluded that the Alaska groundfish fisheries (including the sablefish IFQ fishery and existing pot gear fisheries) were not likely to take North Pacific right whales.

Sperm Whales

In the North Pacific, sperm whales are distributed widely, with the northernmost boundary extending from Cape Navarin (62°N) to the Pribilof Islands (Omura 1955). Sperm whales generally inhabit waters 600 m or more depth. While females and young generally stay in tropical and temperate waters, males may be seen during the summer in the Gulf of Alaska, Bering Sea and throughout the Aleutian Islands (ADF&G n.d.), where they feed on the rich biomass of the North Pacific. Sperm whales feed primarily on medium to large-size squids but also take substantial quantities of large demersal and mesopelagic sharks, skates, and fishes (Rice 1989).

Abundance and populations trends of sperm whales in Alaska waters are unknown. New estimates in the GOA indicate a population size of about 345 sperm whales, but no information on trend is available

(Rone et al. 2017) because historical estimates of the abundance of sperm whales in the North Pacific are considered unreliable. Sighting surveys conducted by the AFSC's Marine Mammal Laboratory (MML) in the summer months between 2001 and 2010 found sperm whales to be the most frequently sighted large cetacean in the coastal waters around the central and western Aleutian Islands (MML, unpubl. data).

While the PBR for the North Pacific sperm whale stock is unknown, there were five serious injuries of sperm whales observed in the Gulf of Alaska sablefish longline fishery from 2010-2014 (Helker, Muto, & Jemison 2016). Between 2014 and 2018, mortality and serious injury of sperm whales was observed in the Bering Sea/Aleutian Islands halibut longline fishery (one serious injury in 2015, prorated at 0.75), the Aleutian Islands sablefish pot fishery (one mortality in 2018), and the Gulf of Alaska sablefish longline fishery (one serious injury in 2016, prorated at 0.75) (Muto et. al 2020). According to the 2010 Biological Opinion (NMFS 2010), the potential for ship strikes is minimal and unlikely to result in an adverse population level effect for sperm whales in Alaska. Because they are an endangered species, fishermen and scientists are concerned about potential entanglements in fishing gear. Entanglements are costly and dangerous to fishermen and can force fishery closures. Incidence of sperm whale entanglement in Alaska appears to be low and would not be expected to reach a level that would have population-level consequences (NMFS 2010). On the basis of total abundance, current distribution, and regulatory measures that are currently in place, it is unlikely that this stock is in danger of extinction (Braham 1992, as cited in Muto et al. 2017).

Humpback Whales

Gear entanglements may debilitate, seriously injure, or kill humpback whales. Between 2014 to 2018 there were 2002 and 2006, there were incidental serious injuries and mortalities of central North Pacific humpback whales from BSAI commercial pot gear, southeast commercial pot gear, and the Hawaii deep set longline fishery (Muto et al. 2021). There were no observed interactions specifically attributed to the BSAI sablefish pot fishery or Alaska jig fisheries and humpback whales from 2009 through 2018 (Muto et al. 2016; Muto et al. 2020). The current estimated mean annual mortality and serious injury rate of Western North Pacific humpback whales incidental to all U.S. commercial fisheries is 0.9 (0.2 based on observed fisheries + 0.7 based on stranding data). The current estimated mean annual mortality and serious injury rate of Central North Pacific humpback whales incidental to all U.S. commercial fisheries is 19 whales with 9.8 of these attributed to commercial fisheries.

On September 8, 2016, NMFS published a final decision changing the status of humpback whales under the ESA (81 FR 62259). In the 2016 decision, NMFS recognized the existence of 14 DPSs, classified four of those as endangered and one as threatened, and determined that the remaining nine DPSs do not warrant protection under the ESA. Three DPSs of humpback whales occur in waters off the coast of Alaska: the WNP DPS, which is an endangered species under the ESA, the Mexico DPS, which is a threatened species, and Hawaii DPS, which is not protected under the ESA. Whales from these three DPSs overlap to some extent on feeding grounds off Alaska.

Wade et al. (2016) estimated the probability of encountering humpback whales from each DPS in the North Pacific Ocean in the Gulf of Alaska. Humpback whales from the endangered western North Pacific DPS are uncommon in the Gulf of Alaska. The threatened Mexico DPS has a higher probability of occurrence while humpback whales from the Hawaii DPS have the highest rates of occurrence in the GOA.

The 2010 FMP biological opinion (NMFS 2010) concluded that the number of entanglements that that might result from interactions with groundfish fisheries appears to be low in contrast to other gear types. And, for such events that do occur with individual whales, the extent of entanglement from groundfish fisheries is not expected to have negative consequences for humpback whales in the North Pacific (NMFS 2010).

It is not known to what extent fishing vessel traffic in the GOA results in humpback whale injury or mortality due to ship strikes. Vessels engaged in groundfish fisheries likely disturb whales and pose a higher risk of collision than those posed by baseline conditions. The risk of vessel collision is higher during the summer months when the population of humpback whales in Alaska is at its peak. Throughout the remainder of the year, the chance of collision is likely to be low given the limited occurrence of humpback whales. The incidence of ship strikes and/or serious injury from vessels involved in the groundfish fisheries are likely negligible, as fishing vessels usually operate at slow speeds and often spend their time in the pelagic environment rather than inside waters where humpbacks tend to forage.

Humpback whales may be disturbed by noise from fishing vessel engines. Research has suggested that noise may cause humpback whales to avoid or leave feeding or nursery areas. Other research has suggested that humpback whales may become habituated to vessel traffic and its associated noise. Still other researchers suggest that humpback whales may become more vulnerable to vessel strikes once they habituate to vessel traffic (NMFS 2010). In many cases, groundfish fishing vessels target different areas than those where humpback whales display high foraging site fidelity (e.g., Frederick Sound, Icy Strait, Lynn Canal, Kachemak Bay). Individual animals may experience disturbance by passing fishing vessels but is not expected to be of a magnitude to have significant impacts on the population in the GOA.

NMFS published its final List of Fisheries (LOF) for 2021, as required by the MMPA. The final LOF for 2021 reflects new information on interactions between commercial fisheries and marine mammals. NMFS must classify each commercial fishery on the LOF into one of three categories under the MMPA based upon the level of mortality and serious injury of marine mammals that occurs incidental to each fishery. The sablefish IFQ longline fishery is listed as a category III fishery in the 2021 List of Fisheries. Category III fisheries are fisheries determined to have a remote likelihood or no known incidental mortality and serious injury of marine mammals. With the exception of the BSAI flatfish trawl, pollock trawl, and Pacific cod longline fisheries, all Federal groundfish fisheries in the BSAI and GOA are Category III fisheries in the 2021 LOF. Based on analogy of the BSAI sablefish IFQ pot fishery and other existing Federal pot fisheries in the GOA, the additional pot gear that may be on the fishing grounds under Alternative 2 (due to increases in the number or amount of time of pots are allowed on the grounds) is not likely to increase the risk of entanglements of humpback whales in the GOA relative to status quo. The number of humpbacks that have been entangled in recent years are as follows: 1 in BSAI commercial pot gear 2015, one in state commercial pot gear in 2017, and one in SE AK commercial pot gear 2015. There were no documented marine mammal interactions in the Bering Sea IFQ sablefish pot fishery or the BSAI Pacific cod pot fishery from 2008 through 2012 and one harbor seal mortality in the GOA Pacific cod pot fishery from 2008 through 2012 (81 FR 20550).

5.5.2. Effects on Marine Mammals

Significantly beneficial impacts are not possible with the management of groundfish/IFQ fisheries as few, if any beneficial impacts to marine mammals are likely with groundfish harvest. Generally, changes to the fisheries do not benefit marine mammals in relation to incidental take, prey availability, and disturbances; changes increase or decrease potential adverse impacts. The only exception to this may be in instances when marine mammals target prey from fishing gear, as seen with killer whales and sperm whales removing fish from hook-and-line gear, as was described thoroughly in Amendment 101 (NPFMC 2016). In this example, the prey availability is enhanced for these animals, because they need less energy for foraging. However, that benefit may be offset by adverse effect from an increased potential for entanglement in the gear or swallowing hooks.

5.5.2.1. Alternative 1

Maintaining the current IFQ regulations listed in Section 2.1 is the status quo or action alternative. The analysis for GOA Amendment 101 analyzed impacts of the GOA sablefish IFQ pot fishery and there

would be no additional impacts under Alternative 1. Continued requirements under Alternative 1 would not address the stated purpose and need for the action, which stresses the need to allow for operational efficiency in the IFQ fisheries.

5.5.2.2. Alternative 2

The only elements expected to have potential impacts on marine mammals under this alternative are Element 3 (jig gear) and Elements 5 and 6 (pot limits and gear retrieval in the GOA sablefish pot fishery). The potential impacts of these elements are explained below. Alternative 2 would not modify the action analyzed in the 2010 FMP biological opinion (NMFS 2010) in a manner that would cause effects to listed species or critical habitat that were not considered in the 2010 FMP biological opinion.

Effects of Element 1

The effects of Element 1, changes to the biodegradable panel, are considered in Section 5.2.1.

Effects of Element 2

No environmental impacts are expected as a result of Element 2 as noted in Section 5.1.2.

Effects of Element 3

Element 3, authorizing the use of jig gear for sablefish in the BSAI and GOA, is not likely to have any significant impacts on marine mammals. Jig gear is already allowed for other groundfish and for halibut in these areas, and the BSAI groundfish jig, GOA groundfish jig, and AK halibut jig gear fisheries are all listed as Category III fisheries in the List of Fisheries (LOF) as of 2021. The only documented interaction was with a fin whale in the GOA groundfish jig fishery, however no documented interactions have occurred since 2007 (Delean et al. 2020, Helker et al. 2015 & Allen et al. 2014). As described in Section 4.7.3, any increase in vessels using jig gear is likely to be minimal and a result of displaced effort from another sablefish gear type (HAL or pots). Therefore, it is expected that there would be no meaningful change in the likelihood of entanglement.

At the time of the analysis, it is not clear whether jig gear is susceptible to whale depredation. The analysts are not aware of any occurrences of whale depredation in Alaska jig fisheries, however it is unclear whether an increase in the use of this gear type (while likely to be minimal) would result in an additional increase in depredation. It is unclear whether jig gear would be fished in areas where whale depredation is more frequent. If so, allowing jig gear for sablefish could potentially contradict the purpose and need described for GOA Amendment 101 and BSAI Amendment 118.

Alternative 2, Element 3 would establish a new fishery for purposes of the MMPA LOF. Should NMFS approve and implement Alternative 2, NMFS would include the GOA sablefish IFQ jig fishery as a fishery in the annual LOF in the future and determine the fishery category based on the level of mortality and serious injury of marine mammals in the fishery. Because this fishery has not yet commenced, there would be no factual basis for making a category determination prior to implementation, other than by speculation or analogy to like gear. If new information in the future reveals that the effects of a GOA sablefish IFQ jig fishery may affect listed species or critical habitat in a manner not considered in prior biological opinions, or if there is incidental take of a humpback whale in the fishery, NMFS would reinitiate ESA section 7 consultation to insure the effects of the fishery are not likely to jeopardize the continued existence of any ESA-listed humpback whale DPSs.

Effects of Element 4

There are no expected impacts on marine mammals as a result of Element 4.

Effects of Elements 5 and 6

Alternative 2, Elements 5 and 6 would change pot limits and gear retrieval requirements in the GOA sablefish pot fishery. NPFMC 2016 analyzed the potential impacts of the GOA sablefish pot fishery on marine mammals and the impact of shifts in effort from HAL to pot gear. Any of the additional flexibilities provided by this action could incentivize more fishermen in the GOA to use pot gear to harvest halibut, though it is unlikely any shift in direct response to this action would be significant (described in Sections 4.7.4 and 5.2.2). Any redistribution of effort from HAL to pot gear could reduce whale depredation of halibut and sablefish on HAL gear, which would decrease prey availability, but could also reduce the potential for whale entanglements with HAL gear.

If IFQ fishermen choose to increase the amount of gear on the grounds (due to an increase in pot limits, Element 5), or the amount of time gear is on the grounds (change in gear retrieval requirements, Element 6) as a result of this action, this could increase the potential for entanglement as compared to status quo. However, some fishery participants have explained that Elements 5 and 6 may result in a smaller fishery footprint, described in Section 4.7.5. The increased operational flexibility afforded through these elements may actually enable harvesters to more efficiently set gear, fish, and clear gear from the grounds under this action, though this may likely differ by vessel and operation. Any reduction in the number of lines in the water or amount of time gear is in the water could reduce potential for entanglement.

Considering the potentially affected environment and the degree of the effects of the proposed alternatives when added to the impacts of past and present actions previously analyzed in other documents that are incorporated by reference, the impacts of the proposed alternatives are considered to be not significant.

5.6. NEPA Summary

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

6. Magnuson-Stevens Act and FMP Considerations

6.1. Magnuson-Stevens Act National Standards

This section will be completed prior to Council final action.

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

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

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

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

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

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

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

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

National Standard 8 — Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirements of National Standard 2, in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.

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

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

6.2. Pacific Halibut Act Considerations

This section will be completed prior to Council final action.

The fisheries for Pacific halibut are governed under the authority of the Northern Pacific Halibut Act of 1982 (Halibut Act, 16 U.S.C. 773-773k). For the United States, the Halibut Act gives effect to the Convention between the United States and Canada for the Preservation of the Halibut Fishery of the North Pacific Ocean and Bering Sea. The Halibut Act also provides authority to the Regional Fishery Management Councils, as described in §773c(c):

The Regional Fishery Management Council having authority for the geographic area concerned may develop regulations governing the United States portion of Convention waters, including limited access regulations, applicable to nationals or vessels of the United States, or both, which are in addition to, and not in conflict with regulations adopted by the International Pacific Halibut Commission. Such regulations shall only be implemented with the approval of the Secretary, shall not discriminate between residents of different States, and shall be consistent with the limited entry criteria set forth in section 303(b)(6) of this title. If it becomes necessary to allocate or assign halibut fishing privileges among various United States fishermen, such allocation shall be fair and equitable to all such fishermen, based upon the rights and obligations in existing Federal law, reasonably calculated to promote conservation, and carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of the halibut fishing privileges. *Provided*, That the Regional Council may provide for the rural coastal villages of Alaska the opportunity to establish a commercial halibut fishery in areas in the Bering Sea to the north of 56 degrees north latitude during a 3-year development period.

The Halibut Act states that the Council may develop regulations to govern the fishery, provided that the Council's actions are in addition to, and not in conflict with, regulations adopted by the International Pacific Halibut Commission (IPHC). It is necessary for the Council to consider the directions in the Halibut Act about the regulations that may result from this action. Much of the direction listed in §773c(c) is similar to the Magnuson-Stevens Act's National Standard 4, as it requires that regulations not discriminate between residents of different States, and directs that if halibut fishing privileges are allocated or assigned among fishermen, such allocation shall be fair and equitable.

6.3. Section 303(a)(9) Fisheries Impact Statement

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

The EA/RIR prepared for this plan amendment constitutes the fishery impact statement. The likely effects of the proposed action are analyzed and described throughout the EA/RIR. The effects on participants in the fisheries and fishing communities are analyzed in the RIR Section 4. The effects of the proposed action on safety of human life at sea are evaluated in Section 4.7.7. Based on the information reported in this section, there is no need to update the Fishery Impact Statement included in the FMP.

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

6.4. Council's Ecosystem Vision Statement

This section will be completed prior to Council final action.

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

Ecosystem Approach for the North Pacific Fishery Management Council

Value Statement

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

Vision Statement

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

Implementation Strategy

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

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

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