

JOINT COUNCIL STAFF AND NATIONAL MARINE FISHERIES SERVICE REPORT ON
THE HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES AND
AMENDMENT 30 PRELIMINARY DRAFT ENVIRONMENTAL ASSESSMENT

In September 2021, Pacific Fishery Management Council (Council) and the National Marine Fisheries Service (NMFS) staff (we) informed the Council we would be modifying the analytical approach for the 2023-2024 biennial harvest specifications and management measures. Council actions require interrelated documentation, including but not limited to, (1) quantitative and detailed analytics to inform Council recommendations, and (2) impacts analysis to satisfy National Environmental Policy Act (NEPA) requirements. We alerted the Council that for the 2023-2024 specifications and management measures, the NEPA document would be markedly shorter, drawing its information and conclusions from the Council analytical document(s), incorporating them by reference ([C.8 Supplemental Attachment 3, September 2021](#)). NMFS has advised the Council to consider draft NEPA documents prior to final Council action. To this end, we offer this preliminary draft Environmental Assessment (EA) for your consideration (Agenda Item F.6.a, NMFS Report 2, June 2022)

How should the Council use this document? We intend this document to inform the public how the Council's final preferred 2023-24 biennial harvest specifications and management measures alternatives will impact the environment. Many of the Council's decision points need justification under the Magnuson-Stevens Act and do not have discernable differences in environmental effects within the scope of the ongoing fishery. The final analytical document, including a description of the final preferred alternative (FPA), will be published in the September 2022 briefing book as an informational report.

What is in this document? The draft EA will contemplate two alternatives, the No Change Alternative (e.g., default harvest control rules, etc., Alternative 1) and a single action alternative (Alternative 2) that constitutes the Council's preliminary preferred alternative¹. After Council final action, Alternative 2 will reflect the Council's FPA.

What is the scope of this document? This document considers the impacts of the changes to groundfish fishery management under the fishery management plan (FMP) on the action area, which is the West Coast EEZ. All of the sector or state-specific impacts, if applicable, are described in greater detail in other public briefing materials and are collectively referred to as analytical document(s) (e.g. [Agenda Item F.4 Attachment 2, April 2022](#)).

What will be the availability of this document in the future? NMFS will publish the EA with the rulemaking and FMP Amendment package.

¹ Alternative 2 includes relevant aspects of the FPA recommended at meetings prior to June 2022.



**Amendment 30 to the Pacific Coast Groundfish Fishery Management
Plan, 2023-2024 Harvest Specifications, and Management Measures
Preliminary Draft
Environmental Assessment (EA) and Regulatory Impact Review (RIR)**

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**And the
Pacific Fishery Management Council (Council)**

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1 Introduction

We, the Pacific Fishery Management Council (Council) and the National Marine Fisheries Service (NMFS), are analyzing the environmental effects anticipated from setting harvest specifications and management measures for the 2023-2024 groundfish fisheries under the [Pacific Coast Groundfish Fishery Management Plan \(Groundfish FMP\)](#).

We are preparing this Environmental Assessment (EA) using the 2020 Council for Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations. The effective date of the 2020 CEQ NEPA Regulations was September 14, 2020. 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)). We began this EA on December 9, 2021 after the [November 2021 Council meeting](#) in which the Council adopted a range of alternatives.

1.1 Proposed Action

In accordance with [Magnuson-Stevens Fishery Conservation and Management Act \(MSA\)](#), the principal legal basis for fishery management within the Exclusive Economic Zone (EEZ), and the Pacific Whiting Act of 2006, the Proposed Action would implement the following:

1. Harvest control rules, harvest specifications (overfishing limits [OFL], acceptable biological catches [ABC], annual catch limits [ACL], and allocations) for all groundfish stocks and stock complexes “in the fishery”¹ including Pacific whiting.
2. Management measures, to achieve, but not exceed, annual harvest specifications.

Some of these elements require an FMP amendment, which constitutes part of the Proposed Action as described in Chapter 2. The Proposed Action also includes our determination of the Pacific whiting coastwide total allowable catch (TAC) in years in which there is no international agreement² on the TAC.

The management area for this action is the EEZ — defined as 3 nautical miles to 200 nautical miles from shores along the coasts of Washington, Oregon, and California and the communities that engage in fishing in waters off these states. Figure 1 of the [Groundfish FMP](#) depicts this management area.

¹ Ecosystem Component (EC) species are not considered “in the fishery” and, OFLs, ABCs, and ACLs are not set for EC species (Section 1.2.1.2, 2015 FEIS)

² The transboundary stock of Pacific whiting is managed through the agreement between the Government of the United States of America and the Government of Canada on Pacific Hake/Whiting of 2003, Nov. 21, 2003, Treaties and Other International Act Series 08-625 (Agreement). In 2020 and 2021, the Joint Management Committee, a bilateral body established by the Agreement, did not come to an agreement on the whiting TAC. In the event of such an occurrence in the future, which requires NMFS to make a decision about the annual whiting TAC, this document supplements prior NEPA analyses.

1.2 Purpose and Need

The purpose of this action is to prevent overfishing while achieving, on a continuing basis, the optimum yield from the fishery. (MSA § 301(a)(1)). This is referred to as “to optimize” or “optimizing” the fishery through the rest of this document.

We need to respond to new scientific data and information about the stocks and stock complexes the needs of fishing communities, to provide additional tools to ensure catch limits are not exceeded, and to afford additional fishing opportunities where possible.

The action must also be consistent with the [National Standard Guidelines](#) (50 CFR 600.305) for fishery management and the Pacific Whiting Act of 2006, as amended.

1.3 Tiering

We are tiering (40 CFR 1501.11) this document from the “Harvest Specifications and Management Measures for 2015-2016 and Biennial Periods Thereafter, Final Environmental Impact Statement” (2015 EIS). The 2023-2024 biennium is the fourth period tiered from the 2015 EIS. As such, the 2015 EIS is incorporated by reference as are each biennial document (2017-2018, 2019-2020, and 2021-2022 EAs) as posted on our document [archive](#).

As discussed in the 2015 EIS and each subsequent tiered document, the adoption and adjustment of regulations for managing the groundfish fishery (including harvest specifications and management measures) are an ongoing, adaptive process. Changes in the type and intensity of environmental impacts tend not to differ substantially from one period to the next.

Section 5.1 of the Groundfish FMP describes the default harvest specifications process as the application of the best scientific information available to the harvest control rule. The No Action Alternative reflects the continued use of the default harvest control rule while proposed changes constitute the action alternatives that we are analyzing under NEPA.

1.4 Public Process

Section 5.4 of the Groundfish FMP describes the specific implementation procedures for specifications and management measures. The Council discussed the proposed 2023-2024 harvest specifications and management measures at five meetings between June 2021 and June 2022. We published draft documents and offered public comment opportunities at each meeting. We noticed the meetings in the *Federal Register* and on the Council’s website and broadcasted the meetings live on the Council’s [YouTube Channel](#). Recordings of each meeting are available on the same channel. Pacific Whiting treaty meetings and documents are available on our [website](#).

We have noticed the proposed rule and this draft EA in the *Federal Register*. Public comment on this draft will inform the final document and our decisions. The “Joint Council Staff and National Marine Fisheries Service Report on Harvest Specifications and Management Measure Documentation” ([Agenda Item C.8 Supplemental Attachment 3 September 2021](#)) detailed how we are documenting the NEPA process for this action. Similar to the 2017-2018 EA, this NEPA document draws from the highly detailed analytical information provided to the Council and the public.

2 Alternatives

Fishery managers must adapt to constantly changing fishery and ecosystem conditions while respecting the goals, indicators, and triggers defined in the Magnuson-Stevens Fishery Conservation and Management Act, the National Standards, and the Groundfish FMP. Within this context, we manage the fishery by constantly collecting, reviewing, and evaluating data before choosing appropriate framed management actions. The Proposed Action ([Section 1.1](#)) that we evaluate in this EA addresses multiple elements of our ongoing adaptive management framework.

2.1 Alternatives Design and Screening

Over the past 20 years, we have developed 31 EAs and 10 Environmental Impact Statements (EIS) for these adaptive groundfish fishery management actions. Five EISs assessed harvest specifications and management measures prior to the 2015-2016 biennial cycle. With the stability of fishery management and rationalization of major components of the fishery (described in Section 1.3, 2021 SAFE), and the development of a programmatic approach, the biennial harvest specifications process (described in Chapter 5 of the FMP), has evolved into a structured process with two components:

- (1) The Council determines catch limits using stock assessments, realized catch, and default harvest control rules for each biennial cycle. The discretionary action is the harvest control rule, therefore, this component is referred to as **Harvest Control Rules** through the rest of this document.
- (2) The Council makes additional adjustments as needed to optimize³ the fishery, referred to as **Management Measures** through the rest of this document.

Each new or revised management action is the outcome of a consultative process that begins as a proposal from states, tribes, fishermen, industry, or environmental interest groups. The Groundfish Management Team (GMT) presents the Council and the public with analyses and options. The Council narrows the range of actions and alternatives and further guides the GMT's analysis. Upon completion of the analysis and the Council's adoption of a Preliminary Preferred Alternative, we prepare an environmental review under NEPA. We also prepare analyses under other applicable laws and executive orders, including the MSA, Executive Order 12866 (Regulatory Planning and Review), and the Regulatory Flexibility Act. This process ensures optimum fishery management while minimizing adverse economic, biological, and physical impacts. It also ensures that we focus the tiered NEPA EA on reasonable final alternatives only. The *analytical document* (@Agenda Item F.4.a, Attachment 2, April 2022@replace with final@ PFMC 2022) describes options that the Council considered but eliminated in planning for this biennial cycle.

The programmatic approach we introduced in the 2015-2016 cycle has allowed us to focus on key elements of the adaptive management system that are new or changed in a particular biennium and that may result in significant impacts to the human environment (40 CFR 1508.1(m)).

³ Optimize means achieving OY and preventing overfishing, per statutory obligations and as described in Section 1.2, Purpose and Need.

Therefore, our analysis in this tiered EA is focused on substantive changes that have not been analyzed in the past: (1) changes to default harvest control rules, and (2) new management measures.

2.2 Harvest Control Rules

In Amendment 24, supported by the [2015 EIS](#), we established default **harvest control rules** that automatically apply the best available scientific information to set catch limits during each biennial cycle. Section 2.1 of the 2021-2022 EA defines the catch limit terms, how we apply rules to the latest estimates of biomass for each stock or stock complex, and how we account for uncertainty to determine the annual catch limits. We incorporate this section by reference. It describes a process by which we determine overfishing limits (OFL), acceptable biological catch (ABC), and annual catch limits (ACL).

Additional information on this process and on catch limits can be found in the following documents:

- Final rule for the 2015–2016 harvest specifications and management measures and Amendment 24 ([80 FR 12567, March 10, 2015](#))
- [Groundfish FMP](#) (Chapter 4)
- [Stock Assessment and Fishery Evaluation \(SAFE\)](#) (PFMC, 2021@)

These default harvest control rules and the automatic OFLs, ABCs, and ACLs that they derive constitute the No Action Alternative.

The Council may decide to diverge from a default harvest control rule. Of approximately 100 fish species that we manage under the Groundfish FMP, we changed four harvest control rules in 2017-2018, four in 2019-2020, and five in 2021-2022. In this 2023-2024 cycle, we are considering changes to **Harvest Control Rules** affecting the calculation of three ACLs.

This component also includes the rule and catch limits for Pacific whiting, which we may establish under different authorities than the other stocks and stock complexes. Although Pacific whiting is incorporated in the Groundfish FMP and in our biennial analysis of groundfish fishery impacts, the annual coastwide total allowable catch (TAC) for Pacific whiting is established under the [2006 Pacific Whiting Act](#) and 2003 Pacific Whiting Agreement with Canada (the Agreement).

The agreement identifies procedures for situations when a TAC is not determined through the international process. These procedures, described in the [2021 Harvest Specifications for Pacific Whiting \(86 FR 32804\)](#) authorize NMFS to set the TAC if necessary. This action therefore constitutes part of **Harvest Control Rules**.

2.2.1 Alternative 1: No Change

The Groundfish FMP structure with Amendment 24, allows us to continue managing the fishery each biennium with the default **harvest control rules**. The NOAA NEPA Companion Manual⁴ defines the no action alternative as “no change from current, ongoing management.” CEQ’s 40 Questions⁵ states that for management actions, “‘no action’ is ‘no change’ from current management direction or level of

⁴ Section 6.B.i, p. 9.

⁵ Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations, 46 FR 18026 (Mar. 23, 1981) (“Forty Questions”), cited in the 2020 Regulations Final Rule.

management intensity.” We therefore use the term “No Change” to distinguish from “No Action” for such cases where we have to publish regulations that authorize the fishery.

A change in catch limits from one year to the next, without a change in the harvest control rule, does not constitute a change in management direction or intensity. All alternatives for harvest specifications aim to ensure that we do not exceed the overfishing limit for any particular stock or stock complex.

The default harvest control rule for all Groundfish FMP stocks and stock complexes, including Pacific whiting, are described in section 4.3 of the FMP. Please see Section 2.3 of the most recent SAFE document for details on these parameters. As explained above, as part of this alternative, NMFS may set the U.S. West Coast share of the Pacific whiting Total Allowable Catch (TAC), when required using the default harvest control rule (may also be referred to as harvest rate). The default harvest rate for Pacific whiting is also described in Article III of the Agreement. We will base the U.S. TAC on the U.S./Canada percentage split in the Agreement.

The No Change alternative reflects decisions made on other components of the Proposed Action discussed in this Chapter.

Table 1-3, from the *analytical document* [F.3.a, Attachment 1, April 2022@](#), shows all of the science-based overfishing limits (OFLs), default harvest control rules, and the calculated Acceptable Biological Catch (ABCs), Annual Catch Limits (ACLs) or Pacific whiting Total Allowable Catch (TAC) under this **No Change Alternative**.

2.2.2 Alternative 2: Alternative Harvest Control Rules

We may consider diverging from the default **harvest control rules** to address conservation objectives, socioeconomic concerns, management uncertainty, or other factors necessary to meet management objectives.

For the Pacific whiting TAC, if proposing a change from the default harvest rate, we will use the best scientific information and will not exceed the Agreement’s default harvest rate unless scientific information indicates a different rate is necessary to sustain the Pacific whiting resource.

Harvest control rules are typically applied at the component species level for stock complexes, then the resulting values are summed to equal the stock complex ACLs. Table 2-2 presents the alternative harvest control rules in 2023-2024 affecting the calculation of ACLs for three stock complexes. An alternative harvest control rule is considered for one contributing species⁶ in each stock complex, and it is at this level that most impacts are assessed in the *analytical document* and in this EA.

Options under this alternative are interchangeable, meaning Option A may be chosen for one and Default HCR could be chosen for another other. During the process of refining alternatives for further analysis (described in Section 2.1 above), we eliminated alternatives for Sablefish, Lingcod, Pacific spiny dogfish and Vermilion/Sunset rockfish. These alternatives are described and analyzed in the *analytical document* (@PFMC 2022), and are now part of the No Change alternative (Alternative 1). We are not

⁶ Contributing or component species within a stock complex are not referred to as a “stock” in this document, pending further Council deliberation and recommendations on stock definitions. Such considerations are beginning in June 2022.

considering alternative harvest control rules for any stocks or stock complexes not listed in Table 2-2. Note that we make our decision on Pacific whiting in the Spring of each year.

TABLE 2-1. PROPOSED ALTERNATE HARVEST CONTROL RULES

Stock Complex	Default HCR for Species within the Complex	Option A	Option B
Blue/Deacon/Black Rockfish Oregon	ABC=ACL P* 0.45	“Case-by-case” ACL contribution set = 2020 ABC contribution of 512 mt for Black rockfish; Default for other species	--
Nearshore Rockfish North & Nearshore Rockfish South	ABC=ACL P* 0.45, 40-10 adjustment ⁷	ACL contribution for Quillback rockfish off California is P* 0.45, SPR 0.55; Default for other species	ACL contribution for Quillback rockfish off California is P* 0.45, SPR 0.60; Default for other species

2.3 Management Measures

Once we derive the ACL or TAC based the default or modified **Harvest Control Rule**, we use **Management Measures** to allow fishermen to maximize catch without exceeding these ACLs or TAC.

Chapter 6, Management Measures, of the Groundfish FMP describes “the procedures and methods that may be used to directly control fishing activities so that total catch of a given species or species group does not exceed specified harvest limits.” Management measures may also involve set-asides, deductions, or allocations that facilitate attainment or equitable harvest opportunities in specific fisheries or states.

Section 6.2 describes the framework procedures that we use to establish, adjust, and implement management measures. We classify these as automatic actions, routine management measures, or new actions.

- **Automatic actions** are nondiscretionary. NMFS may initiate them without prior public notice, opportunity to comment, or a Council meeting. The impacts must be reasonably accountable, based on previous application of the action or past analysis. We may apply these measures to a stock, stock complex, or to individual stocks in a complex. Examples include fishery, season, or gear type closures when a quota is projected to, or has been, attained.

⁷ The 40-10 adjustment is applied to only some component species, where a precautionary reduction is warranted, per the FMP at section 4.6.1.

- **Routine management measures** that the Council determines are likely to be adjusted on an annual or more frequent basis and that we have classified as routine through either the specifications and management measures or rulemaking processes. Section 6.2.1.1 of the Groundfish FMP and 50 CFR 660.60(c) describes all available routine management actions. We may apply these measures to a stock, stock complex, or to individual stocks in a complex.
- **New actions** require discussion at one to three Council meetings and public notice in two *Federal Register* notices depending on the type of management measure. An FMP amendment or regulatory amendment may be required.

The FMP chapter also provides an inventory of the range of management measures available to us. We use management measures to: account for set-asides, deductions, and targets (FMP Section 4.7), adjust or allocate the catch limits (Section 6.3) ; reduce bycatch and bycatch mortality (Section 6.5); authorize or prohibit gear, gear configurations, and deployment strategies (Section 6.6); restrict catch through landing, trip frequency, bag, and size limits (Section 6.7); establish fishing seasons and closed areas (Section 6.8), and limit fishing through permits, licenses, endorsements, and allocations (Section 6.9). All of the above components, as well as ecosystem, economic, or other changes may precipitate changes to management measures.

2.3.1 Alternative 1: No Change

Under this alternative, we will continue to manage the fishery with no change in management intensity, using the automatic actions (if needed during the fishing season) and routine management measures defined in Sections 6.6 to 6.9 of the FMP and at 50 CFR 660.60. Together, these actions help us ensure that catch of individual stocks, stock complexes, or stocks within a complex do not exceed the catch limits, while achieving, on a continuing basis, the optimum yield (MSA National Standard 1, [50 CFR 600.310](#)).

Most of the management measures the Council recommended for this biennium are minor variations to existing management measures (i.e., deductions or allocations of catch limits, annual catch targets, bag limits, trip limits, and recreational season structures). They constitute the No Change Alternative in that they do not represent a change in intensity. We do not discuss their impacts in this tiered NEPA analysis, but summarize them here and incorporate by reference the relevant sections of the *analytical document* that supports the Council’s decision-making process under the MSA (PFMC 2022@).

- We establish **off-the-top deductions** for fisheries for which the Council does not exercise management authority: tribal fisheries, research, experimental fishing permits, incidental open access, bycatch in other fisheries, etc. We explained these deductions in Section 4.2.1.1 of the 2015 FEIS from which this EA is tiered. These deductions do not substantively change and are consistent with past deductions, although the actual amounts may vary. (Section x.x PFMC, 2022@).
- For Pacific whiting we set the tribal, non-tribal, research, and bycatch **set-asides** in the spring of each year,⁸ outside of this biennial cycle, but include the anticipated impacts in this tiered NEPA analysis of the mixed-stock fishery. (Section x.x PFMC, 2022@).

⁸ See for example the 2021 Pacific Whiting Final Rule at [86 FR 32804](#), June 23, 2021.

- This alternative includes the **Annual Catch Targets (ACTs)** that we establish for this biennial cycle: Yelloweye rockfish, [placeholder for Quillback rockfish off California, and Copper rockfish off California@]. As defined in Section 2.2 of the Groundfish FMP, an ACTs is “a management target set below the ACL and may be used as an [accountability measure] in cases where there is uncertainty in inseason catch monitoring to ensure against exceeding an ACL. Since the ACT is a target and not a limit it can be used in lieu of harvest guidelines or strategically to accomplish other management objectives in Section 4.7 of the Groundfish FMP.” (Section x.x PFMC, 2022@).
- We are proposing an FMP Amendment for **Shortbelly rockfish**. See Section x.x (PFMC, 2022@). The proposed amendment describes the management intent for Shortbelly rockfish and requires the Council to review, investigate, and consider changes as appropriate if fishery related Shortbelly rockfish mortalities exceed, or are projected to exceed, 2,000 mt in a calendar year.
- This alternative also assumes that the sector and / or state **allocations** or distributions do not vary substantially from the last biennial cycle. Section 2.2 of the 2021-2022 EA describes allocations for stocks or stock complexes while Section 6.3.2 of the Groundfish FMP defines the formal allocations for sablefish (north of 36° N latitude), non-tribal sector allocations for Pacific whiting, limited entry trawl allocations (Table 6-1), and Pacific halibut bycatch. As with the actual catch limits, the amounts of these deductions and allocations will fluctuate but the overall management intensity remains the same under this alternative. Section x.x (PFMC, 2022@).
- This alternative includes all **minor management corrections, administrative updates** under this alternative. For example, we are proposing to adjust the non-trawl rockfish conservation area boundary lines and waypoints seaward of California to help better manage and enforce commercial and recreational fisheries. E.5.a, Supplemental CDFW Report 1, November 2021 or Section x.x (PFMC, 2022@). We routinely update coordinates to more closely approximate the boundaries with depth contours that are based on the best available depth data. We describe the purpose and definition (coordinates that approximate depth contours) in Section 2.3.3 of the 2021-2022 EA when we last made corrections.

2.3.2 Alternative 2: New Management Measures

For this biennium, the Council recommended the following additional management measures that represent a change in management intensity or measures that are not part of the routine management measures described in Section 6 of the FMP and listed above under the No Change Alternative. These additional management measures are not time-limited and may be in place beyond the 2023-2024 biennium or until otherwise modified.

During the biennial process, the Council explored other proposed management measures that are not part of the proposed action and not included in this tiered EA. These may be incorporated into other fishery management actions outside of the biennial harvest specifications and management measures process. Since the potential effects of these proposals are speculative at this time, we do not consider them under reasonably foreseeable future actions in this tiered EA. These proposals include the prohibition of a shortbelly rockfish directed fishery and removal of the Cowcod Conservation Areas off

California. These proposals are not connected actions (40 CFR 1501.9) in that they are independent of and do not depend on this harvest specifications and management measures action.

We are considering the following proposed management measures under Alternative 2 in this tiered EA:

A - Authorize Hook and Line Gears within the Non-Trawl RCA

The Council is proposing this management measure to offer an alternative to and reduce nearshore fishery effort and bycatch on depleted nearshore stocks, while also avoiding bottom contact and benthic species of concern.

We evaluated the proposal to retain groundfish in the Non-trawl Rockfish Conservation Area off Oregon and California using only non-bottom contact hook-and-line gear that is attached to the vessel and not anchored to the bottom. This gear includes the gear⁹ similar to those used in the three 2021-2022 experimental fishing permits targeting shelf rockfish (Agenda Item F.1 [Attachment 3](#) and [Attachment 6](#) June 2020). Gear that would not be allowed includes bottom longline, pot and trap gear, bottom gillnet gear, vertical set-lines (Portuguese longline gear) and dinglebar gear.

This proposal will require regulation changes. The gear restrictions included in this alternative are intended to reduce the likelihood of the gear hooking seabirds or contacting the ocean floor. The impacts of this change on seabirds and designated groundfish essential fish habitat ([Section 7.2 of the Pacific Coast Groundfish FMP, August 2021](#)) are considered in Chapter 4@.

B - Limited Entry Fixed Gear Sablefish Primary Season Extension

We extended the fishery end date in 2020 and in 2021 from October 31 to December 31 as a temporary rule for emergency measures under section 305(c)(2) of the MSA to address unforeseen impacts of the COVID-19 pandemic ([86 FR 59873](#)). This proposal would permanently extend the sablefish primary tier fishery end date.

A vessel registered to a limited entry fixed gear permit would only be allowed to use hook and line gear inside the non-trawl RCA if we implement management measure A. The sablefish tier quotas associated with the sablefish primary season may only be harvested with longline or pot/trap gear and therefore would still be prohibited from fishing in the non-trawl RCA if we implement management measure A.

This proposal will require an FMP Amendment and regulation changes. Sablefish pot/trap gear has documented entanglements with humpback whales, therefore, potential impacts of this change to humpback whales are considered in Chapter 4. Sablefish longline gear has documented bycatch of seabirds, therefore, potential impacts of this change to seabirds are considered in Chapter 4.

⁹ Gear is attached to the vessel and not anchored to the bottom, suspended at least 50 feet from the bottom, and natural bait is prohibited. Stationary jig gear includes a mainline with a limited number of hooks per line, a limit on the total number of hooks on board the vessel. Troll gear includes a single mainline with a limit on the number of hooks on the line and onboard the vessel, float requirements, and float/hook spacing requirements.

C - Closed Areas for Midwater Trawl

We are proposing this measure as an adaptive management tool to reduce bycatch of groundfish by vessels fishing with midwater trawl gear preseason or inseason, seaward of Washington, Oregon, and California.

We evaluated the proposal to expand the use **block area closures (BACs)** to reduce catch of non-whiting groundfish and keep catch within ACLs. This would be an expansion of an existing tool available to reduce bycatch of salmonids by vessels using midwater trawl gear. This action does not establish area closures, but adds a regulatory framework to make such closures preseason or inseason in the future without further NEPA analysis.

This proposal will require an FMP amendment and regulation changes. The area closures in this alternative are intended to control catch and prevent overfishing of groundfish stocks in 2023 and beyond.

As part of the same regulatory change and FMP amendment package considered here, we are also proposing to allow similar BACs applicable to vessels using bottom trawl gear seaward of Washington. This measure is not analyzed further here, because this aspect of the proposed action had a complete NEPA analysis in the EIS for Amendment 28 to the FMP (NMFS and PFMC 2019). In that analysis, landings data indicated that species compositions vary by both depth and latitude, and the impacts of a closure are going to depend on the specific depths, latitudes and timing of the closure. Regardless, it is expected that impacts of displaced fishing effort from any BAC closure would reduce harvest of fish in the area while negative socioeconomic impacts would be mitigated while the vessels fish in other, open areas that have lower bycatch of the species of concern. This aspect was not adopted as the final preferred alternative in Amendment 28 because BACs were not deemed necessary at the time because the trawl RCA was not being reopened. However, since that time, finer scale spatial closures to reduce impacts of the fishery to managed groundfish are warranted, therefore bottom trawl BACs as an adaptive management tool seaward of Washington are being proposed, for 2023 and beyond.

D – Partial Closure of Recreational Fishery seaward of California

The Council is proposing potentially prohibiting retention of select species as an adaptive management tool to reduce harvest of species managed within a complex inseason, in response to the best scientific information available and information from ongoing fisheries.

E – Expanded use of the Recreational Rockfish Conservation Area

The Council is proposing to expand the use of the recreational Rockfish Conservation Area¹⁰, an existing adaptive management tool.

The Council is proposing to expand the use of the recreational Rockfish Conservation Area to reduce harvest of groundfish inseason, in response to the best scientific information available and information

¹⁰Depth-based areas closed to recreational groundfish fishing. Changes are only being considered for the portion of the recreational RCA off California.

from ongoing fisheries. It expands the purpose of these restrictions to include reducing mortality of species that are not overfished, and/or do not have overfishing limits.

The Council is also proposing to expand the use of the recreational Rockfish Conservation Area to close nearshore areas of the EEZ, in response to the best scientific information available and information from ongoing fisheries. It changes the spatial configuration of the closed areas in an unprecedented way in recreational fisheries, and the effects may differ from past uses of the adaptive management tool.

3 Methodology

In this section, we discuss our analytical approach for this tiered EA and explain why we are including new elements in this biennial cycle or excluding elements that we have addressed in previous cycles.

We base our decisions off 40 years of experience managing the Pacific groundfish fishery. We carefully consider whether each proposal is justified by one or more of the [MSA's National Standards](#) and whether it improves the balance between three simultaneous purposes: (1) maximizing fair, equitable, and efficient attainment from the fishery, while considering the importance of fishery resources to fishing communities and the safety of human life at sea, (2) protecting natural resources by preventing overfishing of groundfish and minimizing adverse effects on other species or habitat, and (3) ensuring that proposed modifications are legal, enforceable, and not overly burdensome on both regulators and fishery stakeholders.

3.1 Scope – Non Groundfish Fish

Managed fish include fish managed under other FMPs (i.e., Salmon, Highly Migratory Species, Coastal Pelagic Species) and those found in state waters. The species composition of non-groundfish species caught in groundfish fisheries is described in Section 3.6 of the 2015 EIS. We have not changed harvest policies or seen changes in fishery performance that have substantively changed the composition in incidentally caught non-groundfish. The most recent information about non-groundfish species caught in the groundfish fishery can be found in the 2019 groundfish discard and catch report (Somers et. al. 2021). Therefore, with no change in effects, we do not address impacts on non-groundfish species in this tiered EA.

3.1 Parallel Fishery Management Actions

In Section 2.0, we introduced our adaptive management approach to groundfish fishery management, which the Groundfish FMP and most recent SAFE document (PFMC 2022) detail. NEPA requires us to evaluate and disclose the environmental impacts of a proposed action and its alternatives; the components of the Proposed Action presented in Section 1.1 include all aspects of the proposed final rule that we need to publish to authorize a sustainable groundfish fishery in early 2023.

The **management measures** component of the Proposed Action consists of related corrections or changes needed to optimize the fishery. We have the discretion to move other management measures that we may have discussed during the 2021 or 2022 Council meetings to subsequent rulemaking processes outside of the biennial harvest specifications and management measures process. We may move measures that we determine constitute discrete actions that are not tied to the harvest specifications process and are therefore “unconnected single actions”, defined by the NEPA regulations at 40 CFR 1501.9(e)(1).

We may also include new fishery management components in the biennial process. For example, in Section 2.4 (and detailed in Section 3.3 below) we explained that we are including Federal actions related to Pacific whiting in this tiered EA.

3.2 Pacific Whiting TAC and Allocations

As part of the proposed action, we are considering the setting of the whiting TAC when NMFS exercises that authority in the absence of a bilateral agreement. We also include the associated sector allocations as connected actions that are closely related to the setting of the TAC and to the biennial specifications process. Pacific whiting is one of the species managed by the Groundfish FMP; the whiting fishery accounted for @57%¹¹ of the groundfish fishery ex-vessel revenue in @2019.

Prior to 2020, the TAC was set through the procedures of the Agreement. We then set the Pacific whiting tribal allocation and research set-aside in a discrete action that we finalized in April-May of each year. The non-tribal allocations of Pacific whiting are specified in the FMP (Section 6.3.2.2). This action was not tied to the biennial harvest specifications and management measures process. Spring 2020 marked the first time that we had to set a Pacific whiting TAC. In Spring 2021, after setting it for the second time ([86 FR 23659](#)), we have determined that it is no-longer an unlikely event. The establishment of a whiting TAC has a close connection to the establishment of all other groundfish catch limits because, as discussed in Section 4.3 of the 2017-2018 EA, the whiting fishery catches other non-whiting species of groundfish. These species may actually limit harvest opportunities in the whiting fishery.

We have always disclosed the *impacts* of the whiting fishery in each biennial NEPA document. These impacts include, but are not limited to, salmon and shortbelly bycatch, groundfish catch and bycatch in the whiting fishery, and shoreside and at-sea processing revenues.

In our mixed-stock fishery catch projection model in each previous biennial cycle, we have used the most recent Pacific whiting TAC that is available when we start our analysis. This means that the TAC we use in our harvest specifications analysis has historically *not been more than three years old* (Table 3-1).

This approach is not new; for example, in Table 4-16 of the 2017-2018 EA we noted that, “the U.S. adjusted 2016 TAC is used as the 2017-2018 ACL proxy”. In Table 4-68 of the 2021-2022 EA, we noted that, “The 2021/2022 Pacific whiting TAC was unavailable during the preparation of our analysis; therefore the 2019 values were used.” In the 2011-2012 EIS, we noted that “ex-vessel revenue estimates for Pacific whiting fisheries are a function of proxy ACLs used in the analysis. The Pacific whiting ACL is determined in March of each year based on annual stock assessments so, for example, the 2011 ACL will be determined in March 2011.” (p. xvi).

¹¹ 2019 as reported in the 2021-2022 EA; \$50m non-whiting (Table 20) and \$65m whiting (Table 21)

TABLE 3-1 - PACIFIC WHITING TAC ANALYZED IN THE BIENNIAL SPECIFICATIONS ANALYSIS

Fishing Year	NEPA Document	NEPA Publication Date	Whiting TAC year used in NEPA	Whiting TAC used in NEPA	Actual Whiting TAC	Actual Whiting TAC Federal Register Notice
2015	2015/2016 EIS	Jan 2015	2013	269,745	325,072	80 FR 27588, 5/14/2015
2016	2015/2016 EIS	Jan 2015	2013	269,745	367,553	81 FR 30203, 5/16/16
2017	2017/2018 EA	Dec 2016	2016	367,553	441,433	82 FR 21317, 5/8/17
2018	2017/2018 EA	Dec 2016	2016	367,553	441,433	83 FR 22401, 5/15/18
2019	2019/2020 EA	Nov 2018	2018	441,433	441,433	84 FR 20578, 5/10/19
2020	2019/2020 EA	Nov 2018	2018	441,433	424,810	85 FR 36803, 6/18/2020
2021	2021/2022 EA	Dec 2020	2019	441,433	369,400	86 FR 32804, 6/23/2021
2022	2021/2022 EA	Dec 2020	2019	441,433	402,646 ¹²	87 FR 21858, 6/13/2022
2023	2023/2024 EA	TBD 2022	2021	@Fill in	TBD	TBD
2024	2023/2024 EA	TBD 2022	2021	@Fill in	TBD	TBD

We will use the 2021 actual Pacific whiting TAC of xxx,xxx metric tons in this 2023-2024 EA. This is well within the ESA-analytical TAC of 500,000 mt we used in our 2017 ESA Section 7 Consultation (NMFS 2017). For the 2025-2026 biennial cycle, we will use the most recent Pacific whiting TAC that is available when we start our analysis, likely the 2023, such that the TAC will not likely be more than three years old.

¹² Based on proposed rule

3.3 Allocations

As shown in Figure 3-1, the harvest guidelines may include allocations between fishery sectors, and applicable to most groundfish species.

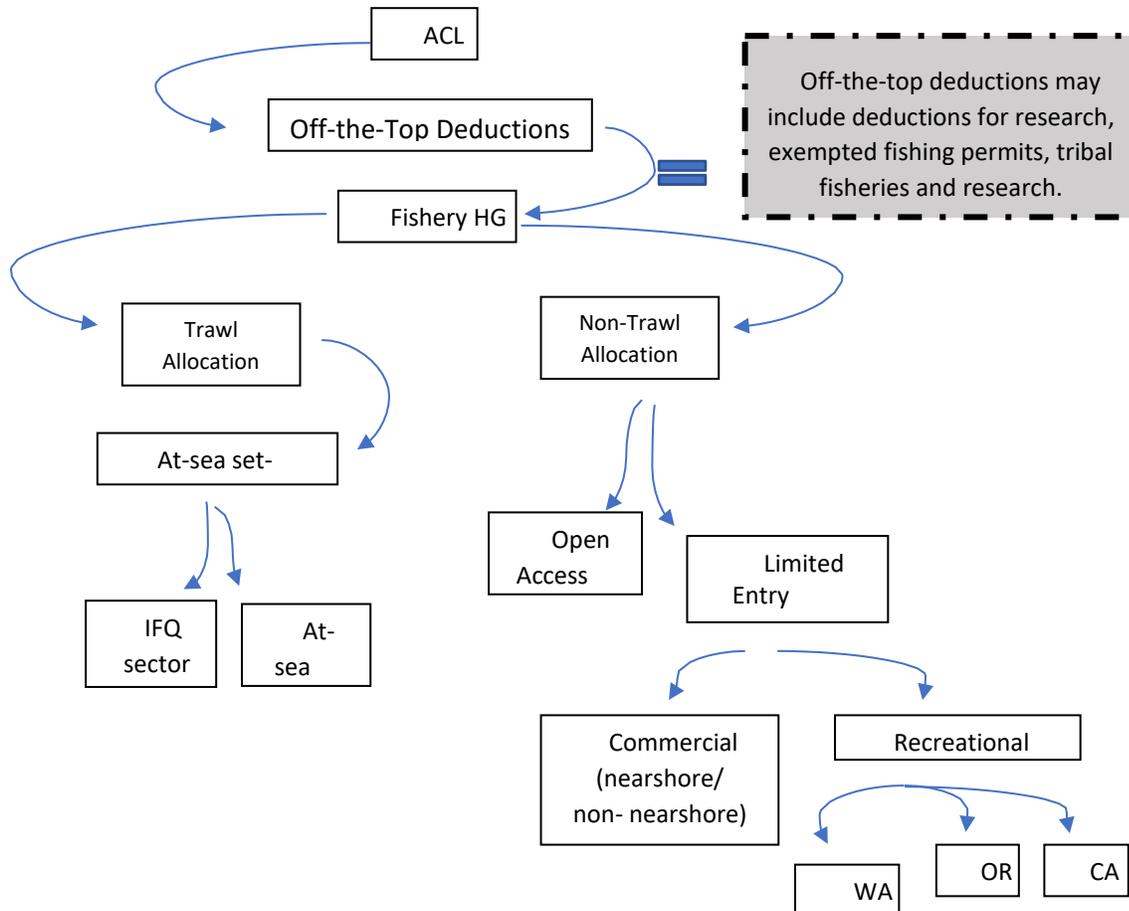


FIGURE 3-1 SCHEMATIC OF COMMERCIAL AND RECREATIONAL ALLOCATIONS BELOW THE ANNUAL CATCH LIMIT

Section 6.3.2 of the Groundfish FMP describes the history and process for these allocation decisions. There are two types of allocations:

1. FMP-specified allocations that require an FMP amendment for modifications. For example, Table 1-6 of the most recent SAFE document shows limited entry (LE) trawl and non-trawl sector allocations as defined in Amendments 21 and 29 and as analyzed under the respective NEPA documents (2005 EIS and 2020 EA).
2. Biennial Specifications Process allocations. For example, Big Skate in 2021-2022. Table 1-6 of the most recent SAFE document shows the allocations that were in place for 2021 and constitute Alternative 1 (No Change) in this NEPA document.

We may further allocate harvest guidelines to specific sectors and states. For example, in 2019-2020, we issued sector specific harvest guidelines for Yelloweye rockfish in the non-trawl sectors and in 2021-2022, we merged the non-nearshore and nearshore harvest guidelines to provide greater flexibility in

managing co-occurring stocks such as lingcod as these two fisheries are subject to the same trip limits (NMFS 2020).

Under our adaptive management process for groundfish management, we may adjust allocations that are not defined in the FMP, such as allocations and sharing agreements to specific sectors or states. In doing so, we recognize that each stock is part of a mixed-stock fishery and that insufficient allocation of one stock impacts attainment of other stocks and stock complexes.

In past biennial cycles, we found that we cannot determine the specific impacts of changes to the allocation percentages. Each individual fishing act may impact physical, biological, and socioeconomic resources. Each fisherman decides for themselves where, when, and how to fish based on external factors (e.g., markets) as well as the catch limits, management measures, and sector allocations. However, we cannot predict where, when, what gear, and what fish they will target. Nor can we predict, with any level of certainty, what percentage of the catch limit or allocation will actually be harvested (attainment).

For the two resources that we can assess quantitatively (managed fish and economics), we assume that the catch limits are fully attained in each analysis year. The stock assessments also assume full attainment of the ACLs, which may be set equal to the Acceptable Biological Catch (ABC) depending on the applied harvest control rule (see Section 2.7.2 of the most recent SAFE).

However, for most stocks and stock complexes, catch has historically been less than the limits we establish. Section 1.4 of the most recent SAFE describes attainment in the Pacific whiting sectors, which, as we have noted, accounts for the largest share of groundfish revenue. Therefore, the actual impact on managed fish and economics are likely to be less than is forecast in this NEPA analysis. Our analysis of impacts on the other resources that we analyze (protected resources, habitat, and ecosystem) is not quantitative. Catch limits are not a predictable proxy for impacts to protected interactions, habitat, and ecosystems.

Section 4.2.1.1 (Deductions from the ACL and Allocations) of the 2015 EIS describes allocations across all sectors, while Section 4.1.4.13 specifically addresses the Pacific whiting sector. We do not discuss the impacts of specific allocations or other allocative measures (e.g. sharing agreements, annual catch targets, and harvest guidelines) further in this tiered EA.

3.4 2015 EIS Analytical Approach and 2024 Forecasts

In Section 4.8 of the 2015 EIS, we evaluated the biological impacts of alternative harvest specification policies over a 10-year period based on projections from stock assessments current at the time. Projections were run under three alternative “states of nature,” which captured the principal source of uncertainty in the relevant stock assessment.

Since 2015, the fishery and the affected environment have evolved (see Sections 12 and 1.3 of the 2021 SAFE (PFMC 2022) with a mature fishery rationalization structure, rebuilt stocks, emerging fisheries responding to new opportunities and increased catch limits, and changes in gear (NMFS 2018) and adjustments to closed areas (NMFS and PFMC 2019). Out of 60 stocks listed in Table 2-4 of the 2021 SAFE, 46 stock assessments (77%) have been updated since the 2015 EIS was published. In 2015, we had seven overfished stocks; all but one has been declared rebuilt by 2021.

Although we continue to use the harvest specification policies that we established in 2015, we modify these policies based on current conditions. The **harvest control rule** component of the proposed action (Section 2.4) describes the modification process. In this biennial cycle, we are proposing to revise default harvest control rules for three stock complexes. We will continue, in future cycles and between those cycles if necessary in compliance with the MSA and NEPA, to revise harvest control rules based on environmental and economic conditions.

However, we will use the best available information (40 CFR 1502.23 Methodology and Scientific Accuracy) for our decisions. The 10-year projections that we made for the 2015 FEIS no longer informs our adaptive management decisions; we rely on more recent stock assessments to base our decisions and ensure that fishermen can optimize their catch while protecting the sustainability of the stocks and stock complexes.

4 Affected Environment / Environmental Consequences

4.1 Managed Fish

4.1.1 Introduction

We tier this section from the 2015 FEIS with an emphasis on Section 2.1.1 (Harvest Specifications), Section 3.1 (Affected Environment-Groundfish), Section 4.1 (Biological Impacts of 2015-2016 Biennial Harvest Specifications on Groundfish Stocks), and Section 4.8 (Biological Impacts of Alternative Long-term Biennial Harvest Specifications on Groundfish Stocks) as updated by the biennial Environmental Assessments (2017-2018, 2019-2020, and 2021-2022).

The 2015 FEIS describes the process by which we establish harvest specifications (Section 2.1.1) and the species that we manage under the groundfish FMP (Section 3). Section 2.1.1 presents the latitudinal and depth distribution for each species (Table 3-1). Section 3.1.1 presents fishery stock assessments, a scientific and statistical process that assesses the population size, reproductive status, fishing mortality, and sustainability. We derive fishery specifications, including Annual Catch Limits (ACLs), from these assessments as guided by the default harvest control rules. Section 3.1.1 of the EIS also explains how we consider uncertainty in the stock assessments when setting these biennial harvest specifications. Section 4.1.2 describes our productivity and susceptibility assessment, which analyzes the vulnerability of stocks to overfishing).

4.1.2 Status/Affected Environment

The *Status of the Pacific Coast Groundfish Fishery – Stock Assessment and Fishery Evaluation (SAFE)* updates the groundfish information in the FEIS sections listed above. The Council publishes the most recent SAFE document on its [website](#) and presents it at the Council Meetings.¹³ The SAFE documents summarize the most recent biological condition of a species and the social and economic condition of the recreational and commercial fishing industries, including the fish processing sector. They present the best available data on the past, present, and possible future condition of the managed stocks, stock complexes and fisheries.

Table 2-1 of the 2021 SAFE Document presents the most recent latitudinal and depth distribution of managed groundfish species, Tables 2-2 and 2-3 presents the most recent productivity and susceptibility assessment scores for healthy stocks and overfished or rebuilding stocks, and Table 2-4 lists the most recent stock assessments and associated management indicators including Maximum Sustainable Yield (MSY) from which we derive the harvest specifications. We incorporate these four tables by reference and summarize the changes since the 2021-2022 EA. While the fishery and underlying ecosystem conditions constantly evolve, we determine that the information below has the greatest influence on impacts of the proposed action and alternatives on managed fish for the 2023-2024 cycle.

1. New stock assessments completed for Copper rockfish (4 assessment areas), Dover Sole, Lingcod (2 assessments areas), Pacific whiting, Quillback rockfish (3 assessment areas), Sablefish,

¹³ For example, the draft 2021 SAFE document was presented under [Agenda Item E.3](#) in the November 2021 Council Meeting.

Spiny dogfish, Squarespot rockfish (CA), and Vermilion & Sunset Rockfish (4 assessment areas). See Table 2-4 in the 2021 SAFE document. The most recent stock assessments are found on the Council's [website](#).¹⁴ Of these, Copper rockfish, Quillback rockfish, and Spiny dogfish are among the stocks with the highest vulnerability rating as presented in Table 2-2 of the 2021 SAFE document. We will continue to focus upcoming stock assessments on these vulnerable stocks when time and resources permit.

2. Overfished and Rebuilding Stocks—Yelloweye rockfish is rebuilding with a target rebuilding year of 2029 under the rebuilding plan implemented in 2019 and discussed in the 2019-2020 EA.
3. Maximizing economic opportunity and operational flexibility, especially as coastal communities are working to recover from economic losses during 2020-21 due to the pandemic.

The proposed action considers deviations from the default harvest control rule for the stocks listed in Table 2-2 of this EA because alternative harvest control rules to relieve restrictions to fisheries while keeping species healthy. Deviations from default harvest control rules can smooth out negative market responses to large fluctuations in harvest, and ensure stability for harvesters, buyers, and processors. Sections 2.3 and 2.4 of the 2021 SAFE document describes the findings of the most recent stock assessments and the distribution, life history, stock status, management history, stock productivity, and fishing mortality for each of these stocks.

4.1.3 Effects of the Alternatives

The NEPA determination of significance is based on context and intensity (1978 NEPA Regulations) or affected environment and degree (2020 NEPA Regulations). The context is the groundfish fishery within the U.S. exclusive economic zone (EEZ) off the coasts of California, Oregon, and Washington. In Section 4.1 of the 2015 FEIS, we identified the following biological indicators of resource health that describe the intensity or degree of the effect on the groundfish species:

- Stock Productivity
 - Are fishing practices likely to change the reproductive success of groundfish stocks?
 - Are fishing operations likely to interfere with or disturb spawning and reproductive behavior or juvenile survival rates such that it raises concern about a stock's ability to maintain its biomass at or above the biomass level that produces the Maximum Sustainable Yield (B_{MSY})?
- Fishing Mortality
 - Are harvest levels likely to result in overfishing?
 - For healthy and precautionary zone stocks are harvest levels likely to remove a portion of the spawning population from the stock such that the stock is likely to become overfished?
 - For overfished stocks, are harvest levels likely to rebuild the stock by T_{TARGET} ?
- Genetic structure
 - Are changes in the time and location of fishing likely to result in changes to the genetic structure of the groundfish populations?

¹⁴ <https://www.pcouncil.org/stock-assessments-star-reports-stat-reports-rebuilding-analyses-terms-of-reference/groundfish-stock-assessment-documents/>

- Will fishing on particular sub stocks or targeting fish with certain characteristics (e.g., large size) alter the genetic structure of the population over time?

The 2015 FEIS identified prey availability as a fourth indicator of biological health. We discuss this as an ecosystem impact in Section 4.4 of this tiered EA.

The Council's *analytical document* (@CITE) assesses the total catch mortality of selected exploited groundfish stocks and stock complexes under both alternatives. The impact projection models are integrated because the fishery is integrated; fishermen generally catch different species in one fishing action (trawl or non-trawl). Section X@.xxx of the <@Analytical report cite> presents detailed analyses on some of the indicators of biological health. We summarize it below.

The 2015 FEIS discussion of genetic structure impacts has not changed (Section 4.1.3) and is not further discussed in this document or the analytical document. The likelihood of adverse effects on genetic structure and reproductive success is reduced if fishing mortality is maintained below the overfishing limit (OFL), which is the purpose of establishing harvest control rules and management measures.

The Harvest Control Rule component of the proposed action consists of deviations from the default harvest control rule (for all stock complexes listed in Table 2-2 of this EA. The justification for these considerations, resulting catch limits, and the anticipated impacts to managed fish are summarized below in three groups. Details of these impacts can be found in the draft analytical document ([F.3 Attachment 1, April 2022](#), Chapter 2).

Oregon Blue/Deacon/Black Rockfish - We first assessed Black rockfish in 2015. However, given concerns about the unique challenges in the data and model, the large overall level of uncertainty, and reflecting our adaptive management process, we created a new Oregon Black/Blue/Deacon Rockfish complex in 2019 and adopted new Black rockfish management measures (harvest guidelines) to reduce risk of overharvest. Under **Alternative 2** we are considering a “case-by-case” harvest control rule for the Black rockfish component of the Blue/Deacon/Black Rockfish complex that is less conservative than the **No Change Alternative**.

Quillback Rockfish - We first assessed quillback rockfish in 2021. While continuing to explore how a species should have stocks or sub-stocks defined in the FMP, we will continue to manage Quillback rockfish as part of the nearshore rockfish north/south stock complex and take into account the best scientific information available. Under **Alternative 2**, we are considering harvest control rules for the quillback rockfish component of the nearshore rockfish north/south stock complex that are less conservative than the **No Change Alternative**. We consider **management measures** to respond to the 2021 quillback rockfish assessment results while the Council undertakes a more holistic exploration of stock definitions.

[@placeholder **Pacific whiting** U.S. domestic TAC under no international agreement@]

The *analytical document* includes a more detailed description of the environmental impacts of the harvest specifications shown in Table 2-2 ([F.3 Attachment 1, April 2022](#), Chapter 2).

We derive the Acceptable Biological Catch (ABC) and Annual Catch Limit (ACL) from policy decisions and the OFL from the stock assessments. Under neither alternative will the ABC or ACL exceed the OFL. Therefore, according to the fishing mortality biological indicator presented above, neither alternative will result in a short- or long-term significant impact on the stocks.

Some parts of the **Management Measures component** of this action may increase catch at the geographic scale of this NEPA analyses. We also expect local effort and revenue to increase or be redistributed as discussed in Section 4.5:

- A. Authorize Hook and Line Gears within the Non-Trawl RCA
- B. Limited Entry Fixed Gear Primary Fishery End Date

The positive changes associated with these management measures are unlikely to substantially change coast-wide catch levels. We do anticipate, that these two measures will provide localized fishing opportunity, especially for those negatively impacted by the reduced catch limits described below. We do not, however, anticipate any adverse significant localized impact to managed groundfish stocks because these measures are expected to redistribute existing fishing effort across time and space, utilizing available fishing opportunities, and not create an influx of new fishing effort.

At the geographic scale of this NEPA analyses, the following proposed management measures may decrease catch or locally redistribute effort. We also expect local effort and revenue to be redistributed or to decrease as discussed in Section 4.5:

- C. Closed Areas for Midwater Trawl
- D. Partial Closure of Recreational Fishery seaward of California
- E. Expanded use of the Recreational Rockfish Conservation Area

The negative changes associated with these management measures may substantially change coast-wide catch levels of some species, however, measures are more likely to cause localized redistribution of fishing effort than to decrease coast-wide catch levels of all species.

Our analyses (@ref section of final analytical document) assumes that harvest will be maximized up to the limits of constraining stocks within each fishery sector and that the catch controls we have in our adaptive fishery management system, defined in the Groundfish FMP, will ensure that these limits are not exceeded. Therefore, these stocks will not become overfished and the impact will not be significant.

4.1.4 Synthesis

The combination of **Harvest Control Rules** and new **Management Measures** is complex. The Alternative 2 proposed harvest control rules result in increased catch while the proposed management measures offer additional fishing opportunities or reduce catch. When combined, we assume that the fisheries fully attain the Annual Catch Limits (ACLs) during each fishing season; that is, the realized catch equals the ACL and does not exceed the overfishing limits. The ACL is lower than overfishing limits for each stock, given the uncertainty built into the harvest control rules (@reference the figure in CH 3?@).

[@placeholder for sentence/paragraph re: Pacific whiting TAC]

Our management measures (catch controls, inseason monitoring and management, near-real time accounting) ensure that the fisheries do not exceed their allocated limits. Therefore, the combination of **harvest control rules** and **management measures** under this proposed action will not result in significant impacts to managed fish.

For most stocks and stock complexes, even before the 2020 COVID-19 impacts, catch has historically been less than the ACL. If similar patterns persist in the 2023-2024 biennial period, the actual impact of

fishing mortality on the future status of most stocks and stock complexes is likely to be less than forecasted in the assessment projections and disclosed in this NEPA document.

4.1 Protected Resources

4.2.1 Status/Affected Environment

Several Federal laws protect mammals, reptiles, fish, and birds. These laws include the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), the Migratory Bird Treaty (MBTA), and Executive Order (EO) 13186—EO 13186, Responsibilities of Federal Agencies to Protect Migratory Birds.

The Services (NMFS and the Fish and Wildlife Service, FWS) have issued Biological Opinions and Incidental Take Statements (ITSs) for ESA-listed species that the groundfish fishery may affect. The Services have concluded that the fishery is unlikely to jeopardize any of these species or their critical habitat. To track and report on impacts to these species, the Council established the Groundfish Endangered Species Workgroup (ESA Workgroup) in 2015. Appendix A of their most recent report ([G.4.a., June 2021](#)), which we incorporate by reference, identifies each Biological Opinion and presents the current incidental take allowances and the estimated take from the bycatch reports for **humpback whales, short-tailed albatross, eulachon, green sturgeon, and leatherback sea turtles**.

The ESA Workgroup confirmed that the fishery generally has minimal interactions with these ESA-listed species and that the fishery has not exceeded any of the current incidental take statement amounts. The workgroup continues to monitor the impacts of the fishery and recommend to us, where appropriate, refinements to reducing uncertainty and impacts.

The Services have determined the Groundfish fishery would not adversely affect **other ESA-listed species** (except for salmon discussed below) not presented in Appendix A of the ESA Workgroup report.¹⁵ This EA does not further address these unaffected species.

Historically, **salmon** bycatch in groundfish fisheries has mostly comprised of Chinook salmon with small amounts of coho salmon. This bycatch has been subject to ESA consultations since 1990. In the 2017 Biological Opinion ([NOAA 2017](#)), incidental take is described in numbers of both listed and non-listed salmon. Incidental take of Chinook may not exceed 11,000 in the whiting sector and 5,500 in the non-whiting sector, in addition to a reserve of 3,500 Chinook salmon per year in the event that bycatch increases unexpectedly. The coho salmon bycatch will not exceed 474 coho (whiting) or 560 (non-whiting) coho per year. On February 23, 2021, we published a final rule implementing salmon bycatch minimization measures to keep fishery sectors within these guidelines, to allow industry to access the Chinook salmon bycatch reserve, and to create Chinook salmon bycatch closure thresholds for the trawl fishery ([86 FR 10857](#)).

[@placeholder, as needed]

The GMT presents a Salmon Scorecard at each Council meeting as part of its most recent inseason report (for example, [C.7.a Supplemental GMT Report 1, September 2021](#)). The Northwest Fishery Science Center's most recent report ([Observed and Estimated Bycatch of Salmon in the U.S. West Coast](#)

¹⁵ For example, in their May 2, 2017 Biological Opinion, FWS confirmed that the fishery is not likely to adversely affect marbled murrelet, California least tern, southern sea otter, bull trout, nor bull trout critical habitat.

[Fisheries, 2002-2022](#)) was presented to the Council in November 2021. The fishery has not exceeded the limits defined in the 2017 Opinion.

While the ESA protects threatened or endangered marine mammals, the MMPA protects all **marine mammals**, all commercial fisheries must be categorized based on consideration of the rate, in numbers of animals per year, of incidental mortalities and serious injuries of marine mammals due to commercial fishing operations relative to the potential biological removal (PBR)¹⁶ level for each marine mammal stock. Under the 2022 List of Fisheries ([87 FR 23122](#)), the WA/OR/CA sablefish pot fishery is Category II for its impacts on humpback whales. All other federally managed Pacific Coast groundfish fisheries are Category III, where the annual mortality and serious injury of a stock by the fishery is less than or equal to one percent of the PBR level.

The List of Fisheries identifies the following marine mammal stocks taken in the groundfish trawl fishery: California sea lion (U.S.), Dall's porpoise (CA/OR/WA), harbor seal (OR/WA coast), northern fur seal (Eastern Pacific), white-sided dolphin (CA/OR/WA), and Steller sea lion (Eastern U.S.). The List of Fisheries identifies the following marine mammal stocks taken in the WA/OR/CA groundfish, bottomfish longline/set line fishery: bottlenose dolphin (CA/OR/WA offshore), California sea lion (U.S.), Northern elephant seal (California breeding), Sperm whale, Stellar sea lion (Eastern U.S.). Section 3.5 of the 2015 EIS describes the fishery's impacts on these stocks.

NMFS [publishes](#) annual marine mammal stock assessment reports by region. The most recent report (2020) presents, where available, the most recent bycatch information by species and fishery, observed and estimated mortality, potential biological removal, and mean annual take. The most recent Marine Mammal Bycatch in U.S. West Coast Groundfish Fisheries report (2002-2016, Jannot et al. 2018) documented observed interactions with marine mammals.

Section 3.5.4 and Table 3-42 of the 2015 FEIS describes the fishery's impacts on non ESA-listed seabirds and estimates future mortality estimates. We also publish the [West Coast Fishery Observer Bycatch and Mortality Reports](#) compiled from observer, landings, and electronic monitoring data. The most recent report (NMFSx 2021) covers seabird interactions from the groundfish and Pacific halibut fisheries as well as selected state fisheries in 2002-2018. The report finds that,

Hook-and-line fisheries account for the largest number of albatrosses taken among the three gear categories (hook-and-line, trawl, pot). Over the last six years, hook-and-line fisheries accounted for 50–63% of seabird mortality, followed by trawl fisheries at 31–45%, and pot fisheries at 2–6% of bycatch (Table 1.) The largest number of albatross taken comes from limited entry (LE) sablefish vessels fishing hook-and-line gears. This prompted regulations requiring streamer lines on hook-and-line vessels fishing in U.S. West Coast groundfish fisheries; these were implemented in December 2015 for vessels 55 ft or longer. (NMFSx 2021).

No short-tailed albatross (ESA-listed) has been observed caught in the groundfish fishery since we published the 2015 EIS.

Pages 19-33 of the 2002-2018 report present albatross and non-albatross bycatch data for selected groundfish fixed gear and trawl fisheries, summarized by sector:

¹⁶ 16 U.S.C. 1362 (20)

- Black-footed albatross were the main species caught in the **limited entry (LE) sablefish endorsed fishery**, which uses longlines. Since 2015, estimated annual mortality in this fishery exceeds five for three non albatross species (sooty shearwaters, northern fulmars, and western gulls) (Table 6) with all annual estimates for each species being less than 10 birds, except sooty shearwater (20.75 in 2018).
- **Limited entry daily trip limits (DTL) longline vessels** target groundfish, primarily sablefish and thornyheads. These vessels have attained their annual sablefish quota limit and fish outside the normal LE sablefish season. On average, 3-4 pink-footed shearwaters are estimated caught each year in this fishery (Table 7).
- **Open access fixed gears** use a variety of fixed gear with hooks, including longlines, fishing poles, and stick gear to target non-nearshore groundfish. Two bird taxa have been reported and estimated (Table 8): black-footed albatross (estimate 6-11) and unidentified gulls (estimate 3-5).
- **Catch share longline fisheries** that hold individual fishing quotas (IFQs) primarily target groundfish species, mainly sablefish. This fishery has 100% observer coverage; therefore, the observed bycatch is a complete census of these vessels. Since the 2015 EIS, 0-2 black-footed albatross have been caught and estimated for 2015-2018 (Table 9).

The report also provides mortality data for pot gear and trawl fisheries, which are generally lower than those listed above.

4.2.2 Effects of the Alternatives

NMFS continues to monitor and report on impacts as described in the previous section and to ensure that the fishery minimizes impacts to protected resources and operates within the incidental take parameters for each applicable species. The Council will continue to explore, test, and implement, where appropriate, management measures that reduce impacts on protected resources. Although we are not proposing any new related measures in this biennial cycle, in recent years, we have adopted tools for mitigating impacts to salmon, including adaptive block area closures and selective flatfish trawl gear requirements (86 FR 10857, 02/23/2021). We have adopted recommendations for seabird bycatch mitigation (80 FR 71975, 11/18/2015), requiring streamer lines be deployed during setting operations on certain vessels (84 FR 67674, 12/11/2019). Trawl fisheries are 100 percent monitored through observers or electronic monitoring, any take of protected and prohibited species will be known quickly and accountability measures, including block area closures for the groundfish bottom trawl fishery, could be implemented to reduce interactions with protected species.

The effects of the proposed action on these resources are difficult to assess; they cannot be predicted quantitatively with any certainty. In past NEPA documents, we have explained that fishery management actions may have positive or negative impacts if fishing effort changes in areas where a particular protected resource congregates, if the number of predators harvested changes, or if protected resources' forage amounts change.

Within this analytical context, we find that the proposed harvest control rules and management measures will not change interactions with protected resources.

Our proposed changes to **harvest control rules** shown in Table 2-1 are not expected to change interactions with protected resources. Our proposed changes to harvest control rules for Pacific whiting may change the catch limits when compared to the No Change Alternative. Such changes would be

consistent with the Pacific whiting Act of 2006 and based on the best scientific information available. Salmon bycatch minimization measures would remain in place under all alternatives to not exceed the limits defined in the 2017 Opinion. [placeholder – as needed RE: whiting@] However, while catch limits may influence fishing effort, the intensity and distribution of fishing effort is not a predictable proxy for interactions with, and impacts on, protected species. Fishing effort is just one factor to consider in a complex ocean ecosystem that is influenced by both ecosystem and external factors:

- **Ecosystem factors** include ocean conditions and trophic relations. The most recent California Current Ecosystem Status Report ([H.2.a, CCIEA Team Report 1, March 2022](#)) summarizes climate and ocean drivers, indicators related to the abundance and condition of key species and the dynamics of ecological interactions, protected resources, and a habitat compression index as a way of understanding food web dynamics, species distribution, and conditions that can lead to whale entanglement.
- **External factors** include markets and fishermen’s decisions as to where, when, and how to fish. This includes decisions on what gear to use and where to land or sell their fish. The risks to protected species differ across fishery sectors and gear types. For example, the midwater trawl fishery has a higher risk of salmon interactions while the fixed gear fishery has a higher risk of whale entanglements. We do not regulate these decisions; we only set catch limits and catch controls for the fishery and sectors. The Ecosystem Status Report and the most recent SAFE document (PFMC, 2021) describes the groundfish fishery and fishing communities.

Based on the 2015 EIS and the 1978 NEPA Regulations, we determine significance under NEPA by looking at the context and intensity of interactions with protected species. Based on the 2020 NEPA Regulations at 40 CFR 1501.3(b), we define significance by the affected environment and degree of effects on protected species. For this tiered EA, we interpret the context as the affected environment, which is the groundfish fishery across multiple sectors and in federal waters off three states. The intensity or degree of impacts on protected resources will vary based on the ecosystem and external factors listed above and are not foreseeable given the extent of proposed changes in catch limits.

Our evaluation of the anticipated intensity or degree of impacts on protected resources are constrained by the incidental take statements and salmon bycatch minimization measures for ESA-listed species. For other protected species and ESA-listed species without quantitative incidental take statements, we rely on our adaptive management system to ensure that the impacts are not significant. This adaptive management system is driven by real-time monitoring, observers, and a biennial process.

Shortbelly Rockfish (No Change Alternative)

The proposed annual 2,000 mt bycatch threshold for Shortbelly rockfish is administrative in nature and not expected to change, positively or negatively, the amount of forage available for protected resources because the proposed measure does not alter fishing activity or effort. It is a preventative measure that informs us if industry is targeting Shortbelly rockfish or if bycatch is unusually high.

A - Authorize Hook and Line Gears within the Non-Trawl RCA (Alternative 2)

We evaluated the proposal to retain groundfish in the Non-trawl Rockfish Conservation Area off Oregon and California using only non-bottom contact hook-and-line gear that is attached to the vessel and not anchored to the bottom.

This aspect of the proposed action is unlikely to change **seabird** impacts compared to the No Change Alternative. Natural bait, which can attract attention from seabirds in the area and lead to hooking of seabirds, will be prohibited in the areas reopened by the proposed action. Additionally, the type of gear allowed under the proposed action has no history of seabird impacts. It is possible that effort could shift from fishing with longline gear and natural bait (No Change alternative) into areas reopened (Alternative 2) to vessels using non-bottom contact hook-and-line gear using artificial bait. This could reduce overall fishing effort with baited hooks in the fishery off Oregon and California. Fewer baited hooks being fished would reduce risks to seabirds overall, though it may or may not result in a reduction in impacts.

This aspect of the proposed action is unlikely to change **humpback whale** or leatherback sea turtle impacts compared to the No Change Alternative. Fish pot gear buoy lines, which can entangle humpback whales and leatherback sea turtles, will be prohibited in the areas reopened by the proposed action. Additionally, the type of gear allowed under the proposed action has no documented impacts to humpback whales. It is possible that effort could shift from fishing with fish pot gear (**No Change alternative**) into areas reopened (**Alternative 2**) to vessels using non-bottom contact hook-and-line gear. This could reduce overall fishing effort with fish pots in the fishery off Oregon and California. Fewer fish pots being deployed would reduce risks to humpback whales overall, though it may or may not result in a reduction in impacts.

In summary, this aspect of the proposed action will not have significant impacts to seabirds, humpback whales, or leatherback sea turtles because the fishery continues to be constrained by catch limits, **Harvest Control Rule component** and other management measures that control effort, **Management Measures component**), which are not revised in this action) and because the specifics of the gear that will have expanded areas to be used for groundfish fishing is expected to have no effect on seabirds, humpback whales, or leatherback sea turtles.

B - Limited Entry Fixed Gear Primary Fishery End Date (Alternative 2)

Adding two additional months to the season increases the amount of time that vessels may be fishing on the water and therefore raises the potential for encounters with protected species through additional gear exposure. As noted in the *analytical document* (Section 11), the sablefish primary fishery is managed with tiers that are restricted to a finite number of gear endorsements, and thus effort is also finite. Current trends of gear use (pot vs. longline) can be found in the Supplemental Information Report to support the emergency action to temporarily extend the season and also discussed in [Agenda Item C.9.a, Supplemental GMT Report 1, September 2021](#) (see Table 1). In 2020, annual gear use was 58 percent longline and 43 percent pot and under the 2020 season extension 82 percent of the sablefish landed was using pot gear. In 2021, annual gear use was roughly 70 percent longline and 30 percent pot (harvest rates by gear during 2021 season extension is not know at this time). Harvest levels will vary based on stock assessments and realized catch, however no changes to the **harvest control rule** are being proposed at this time.

Humpback Whales - Generally, the more gear that is in the water, the greater the entanglement risk is for humpback whales. As mentioned in the *analytical document*, extending the season would be unlikely to have an additive effect on how much gear is in the water, but would more likely keep the gear amount at a status quo level.

Numerous surveys, sightings, models, and tracking efforts on humpback whale migrations and behavioral patterns have found that presence of humpback whales along the West Coast is likely to be higher during the late spring through the fall. This reflects a general migration pattern of humpback whales heading south to breeding areas by December each year, and subsequently starting to return to feeding areas by April (Saez et al. 2020).

Even though whale density is highest along the West Coast while whales are on their feeding grounds there should be fewer and less persistent high density whale aggregations into early-winter off the West Coast (November to December). While sub-adult animals may be present later in the year to feed on anchovy, they typically concentrate closer to the coast in the fall, especially in strong anchovy years (e.g., 2004-07; and 2016-2020). Therefore, if the fishery continues to fish with pot gear in deeper, outer slope habitat beyond typical whale aggregations in the fall and if a lower number of vessels fish during the extension period due to inclement weather or due to competing fishing interests, then we would not expect an increased risk of entanglement from the season extension.

We also expect that the fishery will operate in the extended season as it does in the regular season and no new gear or fishing practices would be used that would negatively impact whales. The fishery will continue to be constrained by the amount or extent of take and the non-discretionary terms and conditions documented in the Incidental Take Statement for humpback whales (NMFS, @2020).

Seabirds - We expect extension of the season to have little to no additional effect on ESA-listed seabirds as compared to the No Change alternative. Pot gear generally poses no risk to seabirds; therefore, we do not expect interaction rates to change beyond what has been estimated under No Change alternative nor as a result of the season extension date if the trend of increased pot gear use during the extension continues as noted in the *analytical document* (section ref#@).

Extension of the season date could increase exposure of seabirds to longline gear (mainly hooks) through an additional two months of fishing activity and thereby could increase the number of interactions, as compared to the **No Change alternative**. However, primary vessels activity could be limited by inclement weather and competing fishery interests and thereby cause gear exposure to remain similar to the **No Change alternative**. Additionally, it's likely that encounter rates could remain similar to those described in [Agenda Item I.4.a, NMFS Report 6, June 2019](#) because, beginning in 2020, vessels are required to deploy streamer lines or to night set year-round (50 CFR 660.21). Finally, we do not expect any changes to gear configurations or fishing methods as part of this action. Therefore it's likely that the number of interactions would remain within the [2017 Biological Opinion](#) incidental take limit of one observed albatross per two-year period or estimated five albatross in a two-year period.

Salmon - Historically, the fixed gear fishery (i.e., the sablefish primary fishery, DTL, and IFQ gear switching sectors) have low Chinook and coho bycatch. Based on Richerson et al. 2019, the limited entry sablefish fishery has taken 10 coho in total and four unspecified salmon from 2003 to 2018. Under the 2017 Biological Opinion, all non-whiting groundfish fisheries, which includes the sablefish primary fishery, have a combined bycatch guideline of 5,500 Chinook salmon and 560 coho salmon. Therefore, it is highly unlikely that the fishery will exceed its guideline threshold under any alternative.

Extension of the season date could increase the potential for salmon to be exposed to longline and pot gear and thereby increase the number of fish caught. However, catch recent trends are far lower than the guideline threshold and it's expected that this trend will continue even with additional fishing

opportunity. In addition, no new gear is being used that would increase the risk of incidental catch. Therefore, we expect extension of the season to have little to no effect on ESA-listed salmonids.

Leatherback sea turtles - Leatherback sea turtles interactions and sightings are rare and recent estimates are summarized in [Agenda item I.4.a NMFS Report 5, June 2019](#). Because only one leatherback turtle has been observed to be killed by the pot fishery between 2003 and 2017, it is possible that the likelihood of the fishery affecting the leatherback turtle population is low. Under the 2012 biological opinion, take is expected to occur in the sablefish pot/trap fishery. The incidental take limit for leatherback sea turtles is a 5-year average of 0.38 leatherback sea turtle injury or mortality per year, and up to 1 leatherback sea turtle injury or mortality in a single year. Since interactions and sightings are rare for this fishery, extension of the season date for the tier fishery is likely to have little to no effect on leatherback sea turtles, nor is it expected to cause the incidental take limit to be exceeded.

In summary, this aspect of the proposed action will not have significant impacts to humpback whales seabirds, salmon, or leatherback sea turtles since the fishery continues to be constrained by harvest control rules, other management measures that optimize the fishery (which are not revised in this action) and because the lack of overlap with area of operations for these fisheries in relation to species aggregations or rare to low observed interaction rates. Therefore, we expect extension of the season date to have little to no effect on humpback whales, seabirds, salmon, or leatherback sea turtles, nor is it expected to cause exceedance of any incidental take limit.

C – Closed Areas for Midwater Trawl (Alternative 2)

[@placeholder, pending completion of analysis in analytical document]

The other proposed **management measures** will not result in any noticeable or predicted impact on protected resources. Management measures associated with the **No Change Alternative** and described in section 2.3.1 will not change the impacts of the groundfish fishery on protected resources. Other new **management measures** associated with **Alternative 2** will also not change the impacts of the groundfish fishery on protected resources.

In summary, we expect that:

- X@X of the proposed changes @will/will not@ result in an exceedance of limits in the incidental take statement for each ESA-listed species.
- X@X of the proposed changes @will/will not@ change the scale or intensity or degree of take of non ESA-listed marine mammals such that NMFS has to revise the fishery Category in the List of Fisheries.
- X@X of the proposed changes @will/will not@ alter any established take limits or the salmon bycatch mitigation measures that we established in 2021. The whiting fishery's Chinook salmon catch threshold, established in the 2017 Biological Opinion ([NOAA 2017](#)), is based on a TAC of 500,000 metric tons but the threshold of 11,000 Chinook salmon does not vary with higher or lower TACs.

4.2.3 Synthesis@ [if needed]

[@We do not anticipate any synthesis Protected Resources impacts in addition to the individual effects described above.]

Or

[When combined, the proposed changes to the **harvest control rules** and **management measures** may result in impacts to Protected Resources that are not described above. @PLACEHOLDER for summary description of combined HCR and MM impacts here]

4.3 Essential Fish Habitat

4.3.1 Status/Affected Environment

We tier this section from the 2015 EIS Section 3.3 and 4.11. Essential fish habitat (EFH), protected by the Magnuson-Stevens Fishing Act (MSA), includes the waters and substrate necessary to support a population to maintain both a sustainable fishery and a healthy ecosystem.¹⁷ We have defined waters to include aquatic areas and their associated physical, chemical, and biological properties that fish use. Substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities (50 CFR 600.10).

The FMP (Chapter 7) and the Amendment 19 FEIS (2006) defines groundfish EFH and identifies Habitat Areas of Particular Concern. These documents describe the relative impact of trawl and fixed gear on habitat types. This impact depends on a variety of factors and is difficult to predict. The factors include: type of substrate, features (e.g., seamounts and canyons), key benthic organisms (e.g., canopy kelp and seagrass), benthic macro invertebrates (e.g. corals and sponges), gear type and configuration, frequency and duration of bottom contact, and the frequency of fishing in a particular area.

We use management measures to mitigate the adverse impacts of fishing on groundfish EFH.¹⁸

Described in Chapter 6 of the Groundfish FMP, these include: gear restrictions (Section 6.6), time/area closures (Section 6.8), and measures to control fishing capacity (Section 6.9). For example:

- We implemented prohibitions on the dredge and beam trawl gear. We also prohibit bottom trawl gear with footropes larger than eight inches in diameter shoreward of a line approximating the 100 fm depth contour to protect habitat (Section 6.6.1).
- We established EFH Conservation Areas to protect habitats, especially those that are important, rare, or vulnerable, from the adverse effects of bottom-contacting fishing gears.
- Because bottom trawl and other bottom contact fishing gear have similar adverse habitat effects regardless of the target stock, all bottom trawl and bottom contact gear closures apply to both MSA and non-MSA fisheries. For example, we prohibit bottom trawling for pink shrimp (a state-managed species) in EFH Conservation Areas and pot gear fishing in the areas that are closed to bottom contact gear (FMP, Section 7.4).

¹⁷ MSA Sec. 303(a)(7), Sec. 3, and 50 CFR 600 Subpart J

¹⁸ As acknowledged in Section 7.4 of the FMP, "Some of the management measures ... have been implemented specifically to mitigate adverse impacts to EFH while others may have another primary purpose ... but may have a corollary mitigating effect on adverse impacts to EFH."

We are required to review EFH descriptions and identification, HAPC designations, and other EFH provisions regularly to ensure that they are based on the best scientific information available, the current nature of the fishery, as well as other new information (Section 7.6, Groundfish FMP). In doing so, we continue to adjust the management measures in response to changing circumstances or new information. In 2019 we finalized the FEIS for Amendment 28 to conserve a net increase in habitat closed to bottom trawl activities. We added dozens of new and revised EFH Conservation Areas, including the large closure of the Southern California Bight, which closed most Federal waters in the area, except some areas closest to state waters where non-groundfish bottom trawling occurs. We also closed waters deeper than 3,500m to bottom contact gear (NMFS 2019). We will continue to refine the definition of EFH as needed; for example, under Amendment 28, we determined that methane seeps should be identified as EFH for groundfish. We will continue these efforts outside of the Proposed Action.

4.3.2 Effects of the Alternatives

None of the alternatives for **harvest control rules** will result in a significant impact on EFH because they will not:

- Change the groundfish FMP definition of EFH,
- Authorize any new gear that may impact bottom substrate, or
- Change the extents or efficacy of EFH Conservation Areas as defined in the FMP and modified in Amendment 28 and the 2019 EIS.¹⁹

We do not expect any of the alternative **harvest control rules** to substantially change the scale, intensity, degree, or location of bottom trawl or fixed gear bottom contact. While we cannot predict individual fishermen's decisions as to where, when, and how to fish, we will continue to constrain catch using catch controls (catch limits and management measures) within the mixed stock fishery.

Some proposed **management measures** may adversely impact EFH. However, we do not expect these impacts, for the three bulleted reasons described above, to be significant. While we cannot predict these impacts as we cannot predict individual fishermen's decisions, we can describe our expectations of the impacts based on best available science and experience. **Alternative 2** contains two proposed measures that may change the impacts on EFH:

A - Authorize Hook and Line Gears within the Non-Trawl RCA

The Non-Trawl RCA is an area closed to most types of commercial groundfish fishing with non-trawl fishing gear. This proposal authorizes only non-bottom contact hook and line gear to be fished in the Non-Trawl RCA. While these gears are designed to fish midwater and reduce bottom contact, incidental bottom contact from weights, hooks, etc. may occur. When fishing with the jig gear (Agenda Item F.1 [Attachment 3](#) and [Attachment 6](#) June 2020), the fisherman immediately pulls the line up, once it hits the bottom, so that it does not drag on the bottom or tangle in the rocks.

¹⁹ The proposed new coordinates and corrections to the non-trawl rockfish conservation area boundary lines off California (**Alternative 1**) will alter, slightly, the shape of the RCA. However, the RCAs are not EFH Conservation Areas as defined in the Groundfish FMP and explained in footnote 2 above.

This measure (**Alternative 2**) is designed allow increased harvest of available fish while keeping impacts to EFH of the ongoing fishery similar to those under the **No Change Alternative** of the **management measures** component. This measure does not change the efficacy of EFH Conservation Areas, and would therefore not have significant impacts, singularly or cumulatively, on EFH.

B - Limited Entry Fixed Gear Primary Fishery End Date

The proposed change in the sablefish primary tier fishery end date will allow for additional flexibility for sablefish fishermen, extending the harvest over a longer time period. It will increase the length of the fishery, but will not, increase fishing effort. Therefore, it may actually slightly lower fishing intensity, spreading the harvest of available quotas over a longer amount of time.

The gear used in this fishery makes contact with the bottom. Longlines or weights may occasionally drag along the seafloor, and pot gear is designed to sit on the seafloor. These gear types have relatively more impact on EFH than non-bottom contact hook and line gears that fish in the water column. These gears would not be allowed to fish in the Non-Trawl RCA under any alternative under consideration.

The other proposed **management measures** will not result in any noticeable or predicted impact on EFH. Management measures associated with the **No Change Alternative** and described in section 2.3.1 will not change the impacts of the groundfish fishery on EFH. Other new **management measures** associated with **Alternative 2** will also not change the impacts of the groundfish fishery on EFH, because they are affecting gears that do not appreciably impact EFH.

We do not anticipate any synthesis ecosystem impacts in addition to the individual effects described above.

4.4 California Current Ecosystem and Climate

4.4.1 Status/Affected Environment

Ecosystem

We tier this section from the 2015 EIS Sections 3.4 and 4.12 as updated by Section 3.2 of the 2021-2022 EA. The Pacific Coast Fishery Ecosystem Plan (FEP) discusses the impacts that fisheries and other human activities have on ecosystem dynamics and marine habitat within the California Current Ecosystem (CCE) (PFMC 2013, Pacific Coast FEP). Section 3.4 of the 2015 EIS characterizes the ecosystem as a web of trophic relationships within the system and indicates how the harvest specifications and management measures impact the relative abundance of organisms within this web.

Because the flow of energy is more of a food web than a food chain, the species in the ecosystem do not neatly divide into clearly delineated trophic levels (for example, an organism may eat a prey item and also eat items that its prey eats), except at the highest and lowest levels. Groundfish, therefore, may occupy multiple trophic levels when considering changes that occur over the course of their life as they change both their size and feeding preferences. (See Figure 3.2.1 or an example of the complexity of the food web). Groundfish are also the prey of several species (2015 EIS Section 3.4.2) including marine mammals, seabirds, and high trophic level fish such as Chinook salmon and large demersal sharks.

The FEP discusses the three major factors that drive changes in the abundance and distribution of fished species in ecosystems: removals by fishing (and consequent changes in community structure and energy flow/predation within ecosystems), removals or habitat loss unrelated to fishing (typically such impacts are greater in freshwater, estuarine, and nearshore systems), and shifts in climate that lead to both direct and indirect changes in productivity (including indirect effects such as changes in the abundance of prey or predators). Any and all of these effects can have cascading and cumulative impacts on ecosystem structure and energy flow in marine ecosystems that could lead to unexpected changes or surprises with respect to marine resource and fisheries management activities.

There is evidence of recent strong recruitment and no change in densities of shortbelly rockfish in its predominant habitats, therefore there is little apparent risk of current fishery impacts affecting the stocks function as a forage species in the CCE ([April 2022 SAFE](#), Section 2.5).

Climate

Both the 2015 EIS (Section 3.4.5) and the Fishery Ecosystem Plan (Section 4.5) detail the effects of climate change on the ecosystem. Climate change is expected to lead to substantial changes in physical characteristics and dynamics within the marine environment, with complex and interacting impacts on marine populations, fisheries, and other ecosystem services (Doney et al. 2012; Harley et al. 2006; Scavia et al. 2002). Three major aspects of future climate change that will have direct effects on the CCE are ocean temperature, pH (acidity versus alkalinity) of ocean surface waters, and deepwater oxygen. (NMFS, 2015).

4.4.2 Effects of the Alternatives

Ecosystem

Section 3.4.3 of the 2015 FEIS, which we incorporate by reference, presents the fishery's impacts on the ecosystem. For example, the reduction of a predator population may allow a prey population to increase. Density-dependent interactions such as competition for habitat may decrease as the population of one or both interacting species declines. The analysis was based on ecosystem simulation modelling of fleets, catch, ecosystem components, and ecosystem health, demonstrated the complexities of these effects. For example,

- Bottom trawl indirectly affected small shallow rockfish and zooplankton (krill), with their populations increasing due to the reduction in predation.
- Fixed gear indirectly affected mesozooplankton (copepods), which increased.
- Pacific whiting trawl indirectly resulted in increases of small planktivores, large piscivorous flatfish, Dover sole, shortbelly rockfish, and shrimp.

The analysis explored the effect on ecosystem attributes of successively adding fleets, finding that forage fish increases with each fleet addition. We take proactive measures when possible. For example, in 2016, we published an environmental assessment for comprehensive ecosystem-based Amendment 1 to protect unfished and unmanaged forage fish species. We amended all of the Council's FMPs to "bring Shared [ecosystem component] Species into the FMPs as EC species and to prohibit new directed commercial fishing in Federal waters on them until the Council has had adequate opportunity to both

assess the scientific information relating to any proposed directed fishery and consider potential impacts to existing fisheries, fishing communities, and the greater marine ecosystem.” (NMFS, 2016).

None of the **harvest specifications** or **management measures alternatives** will result in a significant impact on the California Current Ecosystem because the Proposed Action is part of the adaptive management system that continuously optimizes fishery and ecosystem protections through stock and stock complex management, rebuilding plans, harvest specifications, and management measures.

Under the **management measures No Change Alternative**, the proposed annual 2,000 mt bycatch threshold for Shortbelly rockfish is not expected to change, positively or negatively, the amount of forage available for protected resources in the ecosystem over this biennium because the proposed measure does not alter fishing activity or effort. In the long-term, however, this FMP amendment will provide us with an early indicator of adverse effects on the important forage resource and therefore contribute to our adaptive management toolkit to minimize adverse effect on the ecosystem (see also Section 9.7 of the [draft Analytical document, April 2022](#)).

Climate

NMFS “should consider (1) the potential effects of proposed actions on climate change as indicated by assessing the estimated greenhouse gas (GHG) emissions of the proposed action, and (2) the effects of climate change on proposed actions and their environmental impacts.” (NOAA, 2017). The Proposed Action does not regulate individual fishermen’s decisions as to how far to travel and what engines to use. There are two **management measures** under **Alternative 2**, that would restrict recreational fishing near the shore to reduce harvest of quillback rockfish (necessitated under either the **No Change** or **Alternative 2 harvest specifications**). Some recreational fishermen will choose to fish for groundfish farther offshore which may increase that individual’s fuel consumption if they would have otherwise fished closer to shore. We also assume that some recreational fishermen will choose not to fish groundfish at all and may spend less time on the water as a result, reducing fuel consumption for those individuals. We do not expect the Proposed Action to substantially change the scale, intensity, degree, or location of fishing; the fleet’s overall fuel use would depend more on external factors (fuel price, market conditions, oceanographic changes affecting the location of the target groundfish, etc.). Therefore, we do not discuss further the effects of emissions on climate change.

We annually assess the ecosystem’s current status and climate change indicators in the most recent California Current Integrated Ecosystem Assessment (IEA) Report (Agenda Item H.2.a, CCIEA Team [Report 1](#) and [Report 2](#), March 2022). It identifies some ecological indicators of above-average productivity in 2020-2021 (copepods, juvenile salmonids, anchovies, and upper level predators like seals and seabirds). Other indicators implied unfavorable conditions, particularly off central and northern California (record heat, drought, and warm streams on land, marine heatwave, widespread near-bottom hypoxia, and continued decline in fishery landings).

These annual IEA reports, regular stock assessments, and the most recent SAFE report identifies likely or plausible groundfish responses to a constantly evolving context that includes climate change. For example, the growth of splitnose rockfish was found to correlate with climate and environmental variables, oxygen thresholds throughout the slope waters that impacts the vertical distribution of populations and the species composition of ecosystems, and climate change-driven distributional shift and/or the effect of large recruitments of shortbelly rockfish. (SAFE 2021).

With this information, we adjust our **harvest control rules** and **management measures**, to optimize the fishery while protecting stocks and stock complexes and responding to the best scientific information available. The biennial process allows us to consistently ensure that our fishery management decisions are adaptively managing for possible climate change impacts. While we do not know the cause of the current status of overfished species, the continuation of harvest specifications based on rebuilding plans are examples of this adaptive management process.

We do not anticipate any synthesis ecosystem impacts in addition to the individual effects described above.

4.5 Socioeconomics

4.5.1 Status/Affected Environment

We tier this section from the 2015 FEIS Section 3.2 (Affected Environment), 4.10 (Long-term impacts) as updated by the 2021-2022 EA Section 4.2 (Effects of the Proposed Action on the Socioeconomic Environment). The *analytical document* ([F.4 Supplemental Attachment 3, April 2022](#)) provides the most recent description of the landings and revenue in the commercial, tribal, and recreational groundfish fisheries.

According to the [Fisheries of the United States, 2019 report](#), all west coast commercial fisheries landings were valued at \$637.5 million²⁰ while recreational anglers made 3.76 million trips under all federal and state fisheries.

Section 1.3 of the Socioeconomic portion of the analytical document presented to the Council ([F.4 Attachment 3, April 2022](#)) details the groundfish commercial sector's landings and revenue (including whiting and tribal sectors), as well as the recreational sector trips. It details the most recent available information:

- Average annual inflation adjusted commercial non-tribal ex-vessel revenue was @\$87.7m in @2019
- Pacific whiting constituted @36% of this revenue
- Treaty non-whiting ex-vessel revenue was \$3.22m in 2019 and \$0.8m in 2020²¹ due to closures and reduced access to tribal ports to prevent the spread of COVID-19
- Anglers made an average of 0.96m groundfish²² trips per year in 2012-2020.
- Commercial groundfish landings account for approximately @24% of the west coast fishery landings
- Recreational groundfish²³ trips account for approximately 27% of the region's fishing trips.

4.5.2 Effects of the Alternatives

In addition to NEPA and other applicable laws and executive orders, we have to comply with Executive Order 12866 *Regulatory Planning and Review*, which requires that we determine whether the action

²⁰ Landings include at-sea processors and do not include aquaculture except oysters and clams.

²¹ ([F.4 Attachment 3, April 2022](#), Table 1-5)

²² Includes "bottomfish and Pacific halibut", a group of species which have indistinguishable trip types.

²³ Includes "bottomfish and Pacific halibut", a group of species which have indistinguishable trip types.

could be considered a significant regulatory action. Our Regulatory Impact Review (RIR) provides an analysis of the costs and benefits of the action and alternatives (see Chapter 7 of this EA).

Under the E.O. 12866, an action may be considered significant if it has 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.”

NEPA does not have a federal-wide economic threshold of significance, nor has NMFS established one. The NEPA determination of significance is based on context and intensity (1978 NEPA Regulations) or affected environment and degree (2020 NEPA Regulations). For this EA, we have established the context as the groundfish fishery within the larger west coast fisheries and evaluate the intensity or degree by determining the change in economic impacts across the alternatives shown in Table 3-1.

We first address the changes in economic impact resulting from each component (harvest specifications and management measures) before looking at the total anticipated change. In this tiered EA, for NEPA, we rely primarily on ex-vessel revenue and angler trips as proxy indicators of all socioeconomic indicators to determine whether the impacts may be significant. The Analytical Document ([F.4 Supplemental Attachment 3, April 2022](#)) presents all other relevant economic indicators, including net revenue, income impacts, and employment impacts that we rely on for decision-making under the MSA and other applicable laws, regulations, and executive orders.

The changes in **harvest control rules** that would, if adopted, increase the catch of certain stocks within the mixed stock fishery would have a neutral or positive socioeconomic effect compared to the **No Change Alternative**. The changes in **management measures** would, if adopted, have negative, neutral, or positive socioeconomic effect compared to the **No Change Alternative**.

The **Alternative 2 harvest control rules** will increase the ACL contributions for black and quillback rockfishes to their respective stock complexes, as listed in Table 2-2, when compared to the **No Change Alternative**, while both alternatives have lower contributions than in recent years. Therefore fishermen would experience an adverse economic effect under either alternative compared to recent years, with Alternative 2 being less conservative. The TAC for Pacific whiting was also the lowest in 2021 since the peak in 2017-2019 and is expected to remain low in 2023-24 based on the 2021 assessment (Johnson et al. 2021). Therefore, if fishermen attained 100 percent of their catch limits in both the future and the past, they would experience an adverse economic effect. However, the fishery has never attained 100 percent and is driven by a combination of many factors including, but not limited to markets, industry trends, labor, and effort shifts to and from state fisheries and other federal fisheries.

We assume that the proposed changes in **harvest control rules** result in the following economic impacts: <@ augment with results from the analytical report, if appropriate>

- **Black rockfish shoreward of Oregon** remain vitally important to recreational and commercial nearshore fisheries. This fishery provides the backbone of the fishing opportunities due to its consistency, and it helps insulate coastal communities against the boom and bust nature of other fisheries such as salmon and albacore tuna. The proposed **harvest control rule** and resulting 7 percent increase of the ACL contribution in 2023 under **Alternative 2** allows for more stability within the recreational and commercial fisheries, and allows for flexibility in the management of both sectors.

- **Quillback rockfish shoreward of California** are important to recreational and commercial nearshore fisheries. Not unlike black rockfish described above, quillback rockfish are a steady component of the fishery to insulate coastal communities against boom and bust nature of other fisheries. The proposed **harvest control rule** and resulting [placeholder for % increase of the ACL contribution in 2023] under **Alternative 2** allows for more stability within the recreational and commercial fisheries to allow some continued harvest of co-occurring stocks and allows for flexibility in the management of both sectors.

At the geographic scale of this NEPA analyses, these changes do / do not result in a significant economic impact at the coast-wide NEPA analysis area.

In our analytical document, we assume that the proposed changes in **management measures** result in the following economic impacts:

- Authorize Hook and Line Gears within the Non-Trawl RCA** @[PLACEHOLDER - few sentences referring to the analytical report to describe the \$ change / gain from this measure....]
- Limited Entry Fixed Gear Primary Fishery End Date** @[PLACEHOLDER - few sentences referring to the analytical report to describe the \$ change / gain from this measure....]

We do anticipate, that these two measures will provide localized fishing opportunity, including some of those negatively impacted by the restrictive **management measures** described below.

In our analytical document, we assume that the proposed changes in **management measures** result in the following socioeconomic impacts:

- Closed Areas for Midwater Trawl** may cause short-term and localized negative socioeconomic impacts by displacing fishing effort into other nearby areas that remain open. However, these impacts are likely negligible compared to the potential negative impacts of a premature season closure that might otherwise be necessary to reduce catch of certain groundfish species.
- Partial Closure of Recreational Nearshore Fishery seaward of California** may cause negative socioeconomic impacts by displacing fishing effort to non-groundfish fisheries or to groundfish fishing opportunities farther offshore. It could also decrease angler trips. @[PLACEHOLDER - if available, # angler trips decrease from this measure compared to the No Change Alternative, acknowledging uncertainty....]
- Expanded use of the Recreational Rockfish Conservation Area** similar impacts as Option D above (Partial Closure...) @[PLACEHOLDER - if available, # angler trips decrease from this measure compared to the No Change Alternative, acknowledging uncertainty....]

However, our quantitative analyses (managed fish and economics) in this biennial analysis assume that harvest will be maximized up to the limits of constraining stocks within each fishery sector.

Therefore, the changes associated with these management measures will / will not substantially change coast-wide catch levels and associated revenue or angler trips. At the geographic scale of this NEPA analyses, these changes do / do not result in a significant economic impact at the coast-wide NEPA analysis area.

4.5.3 Synthesis@ [if needed]

[@We do not anticipate any synthesis economic impacts in addition to the individual effects described above.]

Or

[When combined, the proposed changes to the **harvest control rules** and **management measures** may result in economic impacts that are not described above. @PLACEHOLDER for summary description (may be qualitative) of what combined economic impacts might be@]

Based on our analyses, we determine that xxxxx of the alternatives for **harvest control rules** or **management measures** will / will not result in a significant impact on socioeconomics.



**Amendment 30 to the Pacific Coast Groundfish Fishery Management
Plan, 2023-2024 Harvest Specifications, and Management Measures
Environmental Assessment (EA) and Regulatory Impact Review (RIR)**

**Prepared by:
National Marine Fisheries Service (NMFS)
National Oceanic and Atmospheric Administration (NOAA)
Department of Commerce (DOC)**

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Chapter 5 Cumulative Only

Version 2.3 05 13-22

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5 Cumulative Effects

5.1 Analysis Approach

This biennial analysis, tiered from the 2015 EIS (Section 4.15), uses the same parameters as the cumulative effects analysis in the 2021-2022 EA. The EEZ constitutes the geographic scope, the temporal scope for past and present actions begins with the 1982 implementation of the Groundfish FMP, and future actions are limited to the 2023-2024 period because we will evaluate the 2025-2026 period in the next cycle in 2024.

As in previous cycles, this analysis does not identify the specific effects of past actions because we cannot attribute biological, physical, or socioeconomic effects to a specific fishery or non-fishery action across the entire EEZ. We continuously manage the fishery to optimize harvest while minimizing adverse effects on environmental resources. Collectively, the impacts of past actions within our adaptive management system have contributed to the rebuilding of species, management within harvest guidelines, and continued compliance with ESA incidental take statements while accounting for climate change, other environmental trends, and other anthropogenic actions within the EEZ.

5.2 Reasonably Foreseeable Future Actions

As part of our adaptive management system, we are continuously considering and analyzing potential improvements to the fishery. Section 4.15.4 of the 2015 EIS describes the broad range of fishery management and non-fishery management actions that we consider. The most recent Groundfish Workload Planning report ([C.1.a, Supplemental NMFS Report 1: Recently Published Groundfish Rulemakings & Workload](#), September 2021) lists possible upcoming actions. Many of these are administrative and will have little to no impact on the resources that we analyze in this EA. Those that may have associated impacts (e.g., Sablefish Management and Trawl Allocation Attainment, [shortbelly fishery prohibition](#), transition of the directed commercial halibut fishery, or the non-trawl rockfish conservation area / [cowcod conservation area](#) adjustments) are at the early stages of development; their details and associated effects are speculative. The future NEPA analyses associated with each of those actions will account for the final 2023-2024 biennial changes that we are considering in this Proposed Action.

5.3 Incremental Cumulative Impact

We do not expect the alternatives to result in any significant cumulative impacts for any resources through 2024. We expect that the incremental effect of the proposed action to these cumulative impacts on each resource will be minor as described below.

5.3.1 Managed Fish

As we discussed in Section 4.1, we adaptively manage all stocks and stock complexes with a system that periodically assesses stocks, monitors catch, adjusts management measures (catch controls) to keep projected catch within the catch limits, and adjusts management measures to maximize attainment within the catch limits. This adaptive management system does not operate within a vacuum; it

accounts for all other effects on the managed fish stocks and stock complexes, including, but not limited to, climate change effects, bycatch in other fisheries, effects on groundfish essential fish habitat, and other sources of mortality.

Therefore, for the period 2023-2024, when combined with the effects of past, present, and reasonably foreseeable future actions, there will not be a significant cumulative impact on the managed fish. The incremental effect of the action is negligible given the overall adaptive management system described above.

There is no difference in the incremental contribution or the cumulative impacts across the alternatives; none of the **harvest control rule** alternatives or **management measures** alternatives will allow catch to exceed the overfishing limit.

5.3.2 Protected Resources

As described in Section 4.2, several species (e.g., humpback whales and some stocks of Pacific salmon) that interact with the groundfish fisheries are listed under the Endangered Species Act. The Proposed Action, when combined with the effects of past, present, and reasonably foreseeable future actions will not change the trajectory of any of these projected species and the incremental effect of the action, given the Incidental Take Statement constraints and constant monitoring discussed in Section 4.2, will be minimal. We @do / do not@ anticipate any difference in the incremental contribution or the cumulative impacts across the alternatives. [@placeholder for explanation, as needed]

5.3.3 Essential Fish Habitat

Section 4.15.4.3 of the 2015 EIS summarizes past, present, and reasonably foreseeable future actions that may impact groundfish EFH. The 2020-2021 EA (Sections 5.2.2 and 5.4.1) summarized the impact of the Pacific Coast Groundfish Trawl Changes and Amendment 28. Those impacts, both beneficial and adverse, are expected to continue into the future.

We anticipate changes to the non-trawl Rockfish Conservation Area and the Cowcod Conservation Areas off California (see Section 4.2 above) in a future action. However, the scope and effects of those changes are speculative. While we designed both areas to reduce and manage catch of overfished species, they have provided some unquantifiable habitat protections.

The Proposed Action and alternatives, when coupled with ongoing and reasonably foreseeable future actions that are not speculative, will not result in any cumulative significant impacts to EFH. The incremental contribution of the alternatives will be negligible and not discernable across the alternatives.

5.3.4 Ecosystem

The shortbelly management action is administrative; it will not alter the expected amount of shortbelly bycatch anticipated to support the managed fish catch levels or that is available for forage over the period 2023-2024. Therefore the incremental contribution to cumulative impacts is negligible. Overall impacts from the Proposed Action and alternatives, when combined with the effects of past, present, and reasonably foreseeable future actions, the incremental effect of the action will not result in significant cumulative impacts on the ecosystem.

5.3.5 Socioeconomics

[@placeholder – may be revised after analysis of FPA.]

As we discussed in Section 4.1, and above for Managed Fish, we adaptively manage all stocks and stock complexes with a system that, among other things, adjusts management measures to maximize attainment within the catch limits. This adaptive management system does not operate within a vacuum; it accounts for other effects on the socioeconomic environment, including market interruptions and stability, available harvest and mortality of target and non-target stocks, dynamics with and status of other fisheries (such as salmon, etc.), and other social and economic factors.

We anticipate changes to the non-trawl Rockfish Conservation Area and the Cowcod Conservation Areas off California (see Section 4.2 above) in a future action, which may have socioeconomic impacts. However, the scope and effects of those changes to the socioeconomic environment are speculative.

Therefore, for the period 2023-2024, when combined with the effects of past, present, and reasonably foreseeable future actions that are not speculative, there will not be a significant cumulative socioeconomic impact.

6 Lists

[@placeholder - will be completed prior to formal publication]

7 Regulatory Flexibility Act Considerations

For any rule subject to notice and comment rulemaking, the Regulatory Flexibility Act (RFA) requires Federal agencies to prepare, and make available for public comment, both an initial and final regulatory flexibility analysis, unless the agency can certify that the proposed and/or final rule will not have a “significant economic impact on a substantial number of small entities”. These analyses describe the impact on small businesses, non-profit enterprises, local governments, and other small entities as defined by the RFA (5 U.S.C. § 603). This analysis is to inform the agency and the public of the expected economic effects of the alternatives, and aid the agency in considering any significant regulatory alternatives that will accomplish the applicable objectives and minimize the economic impact on affected small entities. The RFA does not require the alternative with the least cost or with the least adverse effect on small entities be chosen as the preferred alternative.

The RFA considerations only address the effects of a proposed rule on entities subject to the regulation (i.e., entities to which the rule will directly apply) rather than all entities affected by the regulation, which will include entities to which the rule will indirectly apply.

Part 121 of Title 13, Code of Federal Regulations (CFR), sets forth, by North American Industry Classification System (NAICS) categories, the maximum number of employees or average annual gross receipts a business may have to be considered a small entity for RFAA purposes. See 13 C.F.R. § 121.201. Under this provision, the U.S. Small Business Administration established criteria for businesses in the fishery sector to qualify as small entities. Standards are expressed either in number of employees, or annual receipts in millions of dollars. The number of employees or annual receipts indicates the maximum allowed for a concern and its affiliates to be considered small (13 C.F.R. § 121.201).

- A fish and seafood merchant wholesaler (NAICS 424460) primarily engaged in servicing the fishing industry is a small business if it employs 100 or fewer persons on a full time, part time, temporary, or other basis, at all its affiliated operations worldwide.
- A business primarily engaged in Seafood Product Preparation and Packaging (NAICS 311710) is a small business if it employs 750 or fewer persons on a full time, part time, temporary, or other basis (13 CFR § 121.106), at all its affiliated operations.

In addition to small businesses, the RFA recognizes and defines two other kinds of small entities: small governmental jurisdictions and small organizations. A small governmental jurisdiction is any government or district with a population of less than 50,000 persons. A small organization is any not-for-profit enterprise that is independently owned and operated and not dominant in its field, while. (5 U.S.C. § 601). There is no available guidance beyond this statutory language regarding how to determine if non-profit organizations are "small" for RFA purposes. The Small Business Administration (SBA) does have provisions for determining whether a business is "small" for RFA purposes and whether it is "dominant in its field," and those provisions can inform how NMFS classifies non-profit organizations for the purposes of RFA analyses in rulemaking. After consultation with the SBA, NOAA Fisheries has decided to use SBA's size standards for non-profit organizations to determine whether a non-profit organization is "small" and, in turn, whether it is "dominant in its field," to apply the statutory definition of a "small organization" in practice:

A nonprofit organization is determined to be “not dominant in its field” if it is considered “small” under SBA size standards:

- Environmental, conservation, or professional organizations (NAICS 813312, 813920): Combined annual receipts of \$15 million or less.
- Other organizations (NAICS 813319, 813410, 813910, 813930, 813940, 813990): Combined annual receipts of \$7.5 million or less.

Provision is made under SBA’s regulations for an agency to develop its own industry-specific size standards after consultation with Advocacy and an opportunity for public comment (see 13 CFR 121.903(c)). NMFS has established a small business size standard for businesses, including their affiliates, whose primary industry is commercial fishing (80 FR 81194, December 29, 2015). This standard is only for use by NMFS and only for the purpose of conducting an analysis of economic effects in fulfillment of the agency’s obligations under the RFA.

NMFS' small business size standard for businesses, including their affiliates, whose primary industry is commercial fishing is \$11 million in annual gross receipts. This standard applies to all businesses classified under North American Industry Classification System (NAICS) code 11411 for commercial fishing, including all businesses classified as commercial finfish fishing (NAICS 114111), commercial shellfish fishing (NAICS 114112), and other marine fishing (NAICS 114119) businesses. (50 C.F.R. § 200.2; 13 C.F.R. § 121.201).

[@placeholder – will be written after Council’s FPA has final economic impacts estimated]

8 Regulatory Impact Review

The President of the United States signed E.O. 12866, “Regulatory Planning and Review,” on September 30, 1993. This order established guidelines for promulgating new regulations and reviewing existing regulations. The E.O. covers a variety of regulatory policy considerations and establishes procedural requirements for analysis of the benefits and costs of regulatory actions. The E.O. stresses that in deciding whether and how to regulate, agencies should assess all of the costs and benefits of available regulatory alternatives. Based on this analysis, they should choose those approaches that maximize net benefits to the Nation, unless a statute requires another regulatory approach.

NMFS satisfies the requirements of E.O. 12866 through the preparation of an RIR. The RIR provides a review of the potential economic effects of a proposed regulatory action in order to gauge the net benefits to the Nation associated with the action. The analysis also provides a review of the problem and policy objectives prompting the regulatory proposal and an evaluation of the available alternatives that could be used to solve the problem.

The RIR provides an assessment that can be used by the Office of Management and Budget to determine whether the action could be considered a significant regulatory action under E.O. 12866. E.O. 12866 defines what qualifies as a “significant regulatory action” and requires agencies to provide analyses of the costs and benefits of such action and of potentially effective and reasonably feasible alternatives. An action may be considered significant if it is expected 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.

[@placeholder – will be written after Council’s FPA has final economic impacts estimated]