

## DRAFT FOR INITIAL REVIEW

### Regulatory Impact Review for Proposed Regulatory Amendment to modify the Pelagic Trawl Gear Definition

## Pelagic Trawl Gear Definition

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**Abstract:** This Regulatory Impact Review analyzes proposed changes to the pelagic trawl gear definition in paragraph 14 of the definition of “authorized fishing gear” at 50 CFR 679.2. The North Pacific Fishery Management Council’s purpose for this action is to address compliance concerns and align pelagic trawl gear regulations with current fishing practices, allow for the continued use and advancement of bycatch reduction devices and net monitoring capabilities (*e.g.* cameras or sensors), and to remove unnecessary outdated text. Measures under consideration include amending the pelagic trawl gear definition to allow flotation and metallic components (*e.g.* sensors) in the codend, remove outdated text related to an obsolete gear variation known as rope trawls, allow flotation within bycatch excluder devices, and allow hardware attaching technology to the net as long as it does not appreciably change the intended performance of the trawl. This action to address compliance concerns is separate from Council’s ongoing efforts to better understand the impacts of pelagic gear on the seafloor and to encourage gear innovations.

For definition of acronyms and abbreviations, see online list: <https://www.npfmc.org/library/acronyms>

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## Executive Summary

This Regulatory Impact Review analyzes proposed changes to the pelagic trawl gear definition in paragraph 14 of the definition of “authorized fishing gear” at 50 CFR 679.2. The North Pacific Fishery Management Council’s purpose for this action is address compliance concerns, align pelagic trawl gear regulations with current fishing practices, allow for the advancement of bycatch reduction devices and net monitoring capabilities (*e.g.* cameras or sensors) and remove unnecessary outdated text. Measures under consideration include amending the pelagic trawl gear definition to exclude the codend from pelagic trawl gear limitations, removing outdated text related to an obsolete gear variation known as rope trawls, allowing flotation within bycatch excluder devices, and allowing hardware attaching technology to the net as long as it does not appreciably change the intended performance of the trawl. This action addresses compliance concerns and is separate from Council’s ongoing efforts to better understand the impacts of pelagic gear on the seafloor and to encourage gear innovations.

## Purpose and Need

The Council adopted the following purpose and need statement to originate this action in February 2024:

The purpose of this action is to align regulations with the longstanding interpretation of pelagic trawl gear in Alaska and to remove unnecessary outdated text. Pelagic trawl gear is defined within 50 CFR 679.2 and has remained unchanged since 1993. The Council and NMFS did not intend the codend to be included within the restrictive definition of pelagic trawl gear specified at § 679.2. A regulatory change to the trawl gear definition at § 679.2 is needed to exclude the codend to better reflect the Council’s original intent and provide for improved regulatory compliance. Revisions are also needed to the pelagic trawl gear definition in paragraph 14 of the definition of authorized fishing gear at § 679.2 to remove outdated text related to parallel line trawls and to allow for flotation within bycatch excluder devices.

Pelagic trawl gear is defined in paragraph 14 of the definition of “authorized fishing gear” at § 679.2. Codend is defined at 50 CFR 600.10.<sup>1</sup> These two regulations, when read in combination, apply the limitations set forth in the pelagic trawl gear definition at § 679.2 to the design components of codends attached to pelagic trawl gear. Until recent years, NMFS AKR did not recognize the implications and likely unintended consequence of the national codend definition at § 600.10 when combined with the Alaska Region definition of pelagic trawl gear at § 679.2. Regulatory changes are necessary to update the pelagic trawl gear definition to allow the use of gear designs commonly used by fishery participants that meet conservation and management goals for pelagic trawl fisheries in the BS and GOA. This action is intended to address compliance concerns and is separate from Council’s ongoing efforts to better understand the impacts of pelagic gear on the seafloor and to encourage gear innovations.

## Alternatives

Alternative 1: No Action (Status quo).

Alternative 2: Revise regulations at 50 CFR 679.2 that define authorized fishing gear for pelagic trawl gear and trawl gear to:

- Option 1. Exclude the codend from limitations applicable to the trawl net.
- Option 2. Remove outdated text related to parallel line trawls.

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<sup>1</sup> The Code of Federal Regulations (CFR) is the official legal print publication containing the codification of the general and permanent rules published in the Federal Register by the departments and agencies of the Federal Government. The Electronic Code of Federal Regulations (eCFR) is a continuously updated online version of the CFR. It is not an official legal edition of the CFR. The eCFR is available at <https://www.ecfr.gov/>.

Option 3. Allow the use of flotation for bycatch excluder devices.

Option 4. Allow hardware that secures technology to the trawl as long as the hardware does not appreciably change the intended performance of the trawl. Technology that may need to be secured to the trawl includes live-feed cameras, flow sensors, etc.

These options are not mutually exclusive.

## Impact Analysis

This section includes a preliminary analysis assessment of the expected outcomes of the specific changes considered in the options. However, this document does not contain an evaluation of the costs and benefits or an evaluation of the potential environmental impacts. A NEPA analysis would be prepared in the next iteration of this analysis based upon any revisions to the alternatives and options resulting from this analysis.

## Next Steps:

In order to move this action forward, analysts are seeking input that will assist implementation of the action alternative and options as well as input from fishery participants and the public that will aid in understanding the potential impacts of these options that would be used to inform the analysis of environmental impacts. The majority of these questions focus on issues related to Option 4 and may be best answered by convening a working group consisting of industry participants, NMFS and Council staff, and OLE. Alternatively, and depending upon clarifications and potential input that may be received during public testimony, it could be possible to identify discrete changes to regulation that could be analyzed in this action without convening a working group. This possible patch would allow work to continue on updating the definition of pelagic trawl gear and, on a separate track, incentivizing gear innovation and refining the performance standard through those other actions.

### Specific input is requested on:

Option 3 (Section 4.2.3):

- Analysts seek information on other commonly used components in bycatch excluder devices and if they are compliant with the definition of pelagic trawl gear and options considered in this action.

Option 4 (Section 4.2.4):

- How could NMFS define “technology”? What are the limits, and what types of technology adoption is the Council hoping to encourage? Without a more specific definition, a participant could argue almost anything qualifies as “technology.”
- The terms “appreciably change” and “intended performance” are unlikely to permit development of objective standards for regulation and enforcement. What is the policy objective the Council is trying to accomplish with this language, and is there a more specific way to frame Option 4 to achieve that goal?
- What are reasonable guardrails for regulatory changes that should occur in this action to allow for the use of innovative technology versus the types of changes that the Council envisions under the separate Council actions to incentivize trawl gear innovation and refine the performance standard?
- In addition, because elements of Option 4 are closely related to the existing limitations on metallic components, NMFS recommends the Council consider revisions to paragraph (14)(viii) of the definition of pelagic trawl gear to clarify specifically where metallic components (such as connectors and a net-sounder) are meant to be limited in pelagic trawl gear.

Impact Analysis (Section 4):

- Input on costs and benefits of each particular change contemplated in this action. Information on the types of impacts to fishing operations and how each alternative and option could impact fishing operations would assist analysts in evaluating the potential impacts of this action.

## 1 Introduction

This document analyzes proposed regulatory changes that would apply exclusively to vessels fishing with pelagic trawl gear in the Bering Sea, Aleutian Islands and Gulf of Alaska EEZ. The measures under consideration include: excluding the codend from limitations applicable to the pelagic trawl net, removing regulatory text related to parallel line trawls, allowing the use of flotation for bycatch excluder devices, and allowing the use of hardware that secures technology to the trawl as long as the hardware does not appreciably change the intended performance of the trawl.

This document is a Regulatory Impact Review (RIR). An RIR provides assessments of the benefits and costs of the alternatives, the distribution of impacts, and identification of the small entities that may be affected by the alternatives (the RIR). This RIR addresses the statutory requirements of the Magnuson Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act, 16 U.S.C. 1801, *et seq.*), Presidential Executive Order 12866, and some of the requirements of the Regulatory Flexibility Act. A RIR is a standard document produced by the Council and the National Marine Fisheries Service (NMFS) Alaska Region to provide the analytical background for decision-making.

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

The proposed action under consideration would amend Federal regulations at 50 CFR 679. Actions taken to amend FMPs or implement regulations governing these fisheries must meet the requirements of applicable Federal laws, regulations, and Executive Orders.

### 1.1 Purpose and Need

The Council adopted the following purpose and need statement to originate this action in February 2024:

The purpose of this action is to align regulations with the longstanding interpretation of pelagic trawl gear in Alaska and to remove unnecessary outdated text. Pelagic trawl gear is defined within 50 CFR 679.2 and has remained unchanged since 1993. The Council and NMFS did not intend the codend to be included within the restrictive definition of pelagic trawl gear specified at § 679.2. A regulatory change to the trawl gear definition at § 679.2 is needed to exclude the codend to better reflect the Council's original intent and provide for improved regulatory compliance. Revisions are also needed to the pelagic trawl gear definition in paragraph 14 of the definition of authorized fishing gear at § 679.2 to remove outdated text related to parallel line trawls and to allow for flotation within bycatch excluder devices.

Pelagic trawl gear is defined in paragraph 14 of the definition of “authorized fishing gear” at § 679.2. Codend is defined at 50 CFR 600.10.<sup>2</sup> These two regulations, when read in combination, apply the limitations set forth in the pelagic trawl gear definition at § 679.2 to the design components of codends attached to pelagic trawl gear. Until recent years, NMFS AKR did not realize the implications and likely unintended consequence of the national codend definition at § 600.10 when combined with the Alaska Region definition of pelagic trawl gear at § 679.2.

Since 1993, NMFS and the Council and NMFS have supported efforts by industry and researchers at the Alaska Fisheries Science Center (AFSC) to develop a number of gear innovations through cooperative research and the issuance of exempted fishing permits (EFPs) to reduce bycatch, impacts on benthic habitats, and improve operational efficiency of trawl gear. These efforts and gear improvements potentially conflict with the strict interpretation of the regulations and limitations that apply to the codend attached to a pelagic trawl net. Bycatch excluder devices have been and continue to be a crucial tool used in pelagic trawl nets to reduce salmon bycatch. However, current designs of those devices often contain flotation, as well as metallic components other than connectors, to function properly. Bycatch excluder devices are further described in section 3.2.3 of this document. Flotation is prohibited in pelagic trawl gear through paragraph (14)(vi) of the definition of authorized fishing gear at § 679.2. These implications for the codend and bycatch excluder devices are important to address as it has been common industry practice to use flotation and metallic components in codend design and salmon excluder devices. The removal of flotation and metallic components from the excluder devices and the codend would create substantial operational challenges. Vessels participating in the BS Pollock fishery are required to use pelagic trawl gear and changes to the definition are needed to improve compliance and clarity given the recently discovered implications of the definition of codend at § 600.10. A physical definition of pelagic trawl gear remains necessary as an enforcement tool to monitor compliance with gear and area closures where use of nonpelagic trawl gear is prohibited. Regulatory changes are necessary to update the pelagic trawl gear definition to allow the use of gear designs that are commonly used by fishery participants and that meet conservation and management goals for pelagic trawl fisheries in the BS and GOA.

## 1.2 History of this Action

In the early 1990’s, distinguishing between pelagic and nonpelagic trawl gear emerged as a management measure intended to reduce the bycatch of halibut and crab species. After two short lived rulemakings<sup>3</sup>, the Council and NMFS established the current definition of pelagic trawl gear in 1993 (58 FR 39680, July 26, 1993). The 1993 final rule included the current pelagic trawl gear definition to facilitate enforcement and a performance standard to limit contact with the seafloor. As explained in the preamble to the proposed rule, the Council and NMFS designed the performance standard with the objective to “reduce halibut and trawl bycatches by discouraging or preventing trawl operations on the seabed when halibut and crab PSC allowances have been reached” (58 FR 17196, April 1, 1993). This is in line with management strategies at that time; when bycatch PSC allowance of halibut or crab were reached, further trawling with trawls other than pelagic trawls was prohibited. NMFS stated that such a measure would not be effective unless impartial persons are on board to observe the catches. A physical definition of a pelagic trawl is still necessary to enforce closures to nonpelagic trawls. Various closure areas have been recommended by the Council and implemented by NMFS as specified in regulations at § 679.22. Area-based conservation measures, such as closure areas are one of the many tools used by the Council to achieve sustainable fisheries conservation goals. There are about 200 conservation areas that have been

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<sup>2</sup> The Code of Federal Regulations (CFR) is the official legal print publication containing the codification of the general and permanent rules published in the Federal Register by the departments and agencies of the Federal Government. The Electronic Code of Federal Regulations (eCFR) is a continuously updated online version of the CFR. It is not an official legal edition of the CFR. The eCFR is available at <https://www.ecfr.gov/>.

<sup>3</sup> NMFS published an emergency rule on August 17, 1990 (55 FR 33715) followed by final regulations on January 24, 1991 (56 FR 2700).

established to conserve marine resources and biodiversity, protect vulnerable habitats and ecosystems, and support healthy coastal communities. A large portion of the Exclusive Economic Zone off Alaska (1,026,771 nm<sup>2</sup>) is closed to bottom trawling year round. These conservation and spatial management measures are summarized in the North Pacific Conservation and Spatial Management Areas in Alaska's Exclusive Economic Zone Area Summaries (NPFMC 2023)

The pelagic trawl gear definition is necessary as an enforcement mechanism to allow the clear distinction between pelagic trawls and nonpelagic trawls to be able to enforce areas closed to nonpelagic trawls. Essentially, the performance standard was implemented with the purpose to reduce bycatch and over time, with the implementation of numerous other management measures such as catch share programs, and other actions the purpose the performance standard serves in today's management landscape is more focused on protecting sensitive habitats (through habitat conservation closures). Both of these purposes rely on a clear definition of pelagic gear to facilitate enforcement of other management measures. Closure zones are further described in Section 3.4 of this document.

In the definition of pelagic trawl gear, there was no explicit mention of the codend or of associated restrictions applying to pelagic trawl gear codends. As such, since 1993 and until recently, it was reasonable to believe that the limitations included in the definition of pelagic trawl gear did not apply to the codend attached to pelagic trawl gear.

The definition of the term "codend" originated from a Presidentially directed initiative in 1996 that called for all agencies to review regulations and eliminate or modify those that were obsolete, duplicative, or otherwise in need of reform (61 FR 19390, May 1, 1996). In support of this directive, NMFS consolidated regulations from nine separate parts of title 50 of the CFR down to two. The consolidated regulations pertained to general provisions of the Magnuson-Stevens Act and NMFS noted that no substantive changes other than those specified would be made. The definition of codend as the terminal, closed end of a trawl net was added to § 600.10 in the final rule implementing the streamlined regulations in 1996 and was not identified to be a substantive change that would impact fishing operations (61 FR 32538, June 24, 1996). MSA provisions at part 600 apply to all NMFS regions, including Alaska. There was no explanation provided in the final rule detailing why NMFS added the definition of "codend".

The implications of the combined definitions of codend at § 600.10 and of pelagic trawl gear at § 679.2 were first identified in the June 2023 initial review draft analysis of alternatives that the Council considered to promote Bristol Bay red king crab (BBRKC) stock health.<sup>4</sup>

In June 2023, the Council requested *NMFS and OLE to work with Council staff and industry to identify revisions to the regulatory definition of pelagic trawl gear to:*

- *clarify that the codend is not intended to be regulated*
- *allow for gear innovation*
- *resolve any inconsistencies in current regulations and/or outdated regulations.*

On October 2, 2023, NMFS OLE hosted a public workshop to engage with stakeholders and fishery participants on ways to revise the trawl gear performance standard so that it is clear, enforceable, and meets Council objectives.<sup>5</sup> Discussion points and a meeting summary were provided to the Council during its October 2023 meeting.<sup>6</sup>

NMFS prepared and presented a discussion paper to the Council in February 2024 addressing the issues related to the pelagic trawl gear definition and options to allow for gear innovation.<sup>7</sup> In that discussion

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<sup>4</sup> Available under Agenda item C4 at: <https://meetings.npfmc.org/Meeting/Details/2993>.

<sup>5</sup> Agenda and review documents available at: <https://meetings.npfmc.org/Meeting/Details/1885>.

<sup>6</sup> Available under Agenda item E1 at: <https://meetings.npfmc.org/Meeting/Details/3003>.

<sup>7</sup> Available under Agenda item D1 at: <https://meetings.npfmc.org/Meeting/Details/3029>.

paper, NMFS recommended the Council consider several regulatory revisions to address inconsistencies between common gear configurations and the limitations set forth regulations at § 679.2. At that meeting, the Council passed a motion adopting a purpose and need statement with a list of alternatives and options for analysis that are included in this document.

### 1.3 Other Ongoing and related actions

This RIR analyzes the impacts of proposed changes to the definition of pelagic trawl gear for the purpose of facilitating compliance and enforcement. This proposed action is separate from Council's ongoing efforts to better understand the impacts of pelagic gear on the seafloor and to encourage innovation that is expected to reduce potential impacts to the seafloor and improve pelagic trawl gear efficiency and effectiveness. These ongoing actions for trawl gear research, pelagic trawl gear innovation and the trawl gear performance standard are described below.

#### 1.3.1 Pelagic Trawl Gear Research

In February 2024, the Council received a presentation from Dr. Brad Harris and Dr. Craig Rose detailing ongoing work by researchers at Alaska Pacific University to review available information and tools to assess the degree to which fishing gears are contacting the seafloor, and studies on gear impacts, which could be used to evaluate whether additional management actions are needed to mitigate the impacts of fishing gear on benthic habitat and stocks that rely on such habitat.<sup>8</sup> The presentation included:

- a summary of research conducted in the Bering Sea, Aleutian Islands, and Gulf of Alaska to estimate and reduce the impacts of fishing gear on benthic habitat including examples of Council fishery management actions informed by this research;
- a review of the fishing effects model, including current uses of the model and potential future applications to inform management actions; and
- an update on the ongoing research to catalog pelagic trawl gear configurations and methods to measure pelagic trawl gear ground clearance and contact with the seafloor.

Following this presentation and additional information provided in the BBRKC closure areas initial review draft analysis, the Council chose to take no further action on the analysis of alternatives for BSAI groundfish fishery area closures due to negative impacts on Chinook salmon, chum salmon, halibut, and other PSC species.<sup>9</sup> The Council intends to use in-season information and results from several ongoing research projects (winter pot surveys, crab tagging studies, pelagic and pot gear research) to develop framework agreements for dynamic closures and crab avoidance measures for the BSAI trawl, pot, and hook-and-line sectors to respond to changes in crab abundance and distribution with measurable objectives to evaluate performance. The Council continues to place a high priority on these research projects and encourages funding entities to also prioritize them highly. The Council requested regular updates on ongoing collaborative research.

#### 1.3.2 Pelagic Trawl Gear Innovation and Performance Standard

In a February 2024 Council motion,<sup>10</sup> the Council tasked staff with preparing a discussion paper to inform options for incentivizing pelagic trawl gear innovation with the following objectives:

- minimizing bycatch to the extent practicable

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<sup>8</sup>Presentation on fishing gear research is available under Agenda item B1 at: <https://meetings.npfmc.org/Meeting/Details/3029>.

<sup>9</sup> The Council motion is available under Agenda item C2 at: <https://meetings.npfmc.org/Meeting/Details/3029>.

<sup>10</sup> Available under Agenda item C2 at: <https://meetings.npfmc.org/Meeting/Details/3029>.



- minimizing the impacts of pelagic trawl gear on sensitive benthic habitat and unobserved mortality of stocks that rely on such habitat
- improving or maintaining fishing efficiency
- flexibility for trawl gear innovation within the constraints of other objectives (e.g., adapting to new technologies)

The Council provided direction to staff that the discussion paper should detail:

- the current limitations to gear innovation and modification (e.g., technological or enforcement constraints)
- the process for such gear revisions (e.g., EFP)
- examples of how past changes to gear definitions have been moved through the Council process (e.g., elevated sweeps on nonpelagic trawl gear)
- management tools that could be used to inform metrics to achieve these objectives (e.g., EFH and Fishing Effects model)
- downstream impacts to the management objectives of the various regulatory provisions that use the current definition of pelagic trawl gear and have been built upon the previous actions (if applicable)
- potential displacement and spillover impacts from any potential changes (e.g., PSC or target species catch)

The Council also stated an intention that it will review options for changes to the performance standard following this work.

The Council intends this discussion paper to be responsive to ongoing concerns about the potential impacts of pelagic trawl gear on benthic habitats. Since the trawl gear definitions apply to all federally managed areas in the GOA and BSAI, and NOAA OLE has requested consistency, the Council intends that potential future actions to allow for gear innovation would apply to all vessels using pelagic trawl gear.

As indicated in Section 8 of the February 2024 BBRKC initial review draft analysis, to be able to enforce a pelagic trawl gear performance standard, there must first be an enforceable definition of the gear type that allows for clear and consistent identification of legal and noncompliant gear. The February 2024 discussion paper attempted to untangle the issues associated with the gear definition from issues associated with the gear performance standard, which have been confusing and hard to distinguish in previous Council discussions. This action separates the idea of innovation that aligns with the objects identified rather than obfuscating the details of the definition.

The Council expressed an intention that as information becomes available from ongoing research, that information would be included in the discussion papers and analyses that are prepared for potential future Council actions. Following this work, the Council expects to be able to identify if a performance standard is needed as well as considerations to make that performance standard enforceable. The Council has yet to schedule its review of the pelagic trawl gear innovation discussion paper.

### **1.3.3 Fishery Management Goals and Objectives**

The Council's groundfish fishery management approach is summarized in table ES-1 of the Fishery Management Plans for Groundfish of the Bering Sea and Aleutian Islands and Gulf of Alaska Management Areas. In 1993, NMFS implemented the existing definition of pelagic trawl gear with the stated objective to facilitate enforcement and prosecution of violations of time and area closures for nonpelagic trawl gear. In the same action, NMFS implemented a trawl performance standard to reduce halibut and trawl bycatches by discouraging or preventing trawl operations on the seabed when halibut and crab PSC allowances have been met. Since 1993, the Council has recommended and NMFS has implemented numerous changes to management measures to reduce bycatch and protect and conserve sensitive habitats. The table below summarizes the existing management measures applicable and recent

or ongoing Council actions that are intended to address the goals of reducing bycatch in pelagic trawl gear fisheries and protecting sensitive habitats from pelagic trawl gear impacts.

Table 1-1 Management measures and recent or ongoing Council actions intended to reduce bycatch in pelagic trawl fisheries and protect sensitive habitats from pelagic trawl gear impacts.

Management Goal	Existing Management Measures addressing this goal (from Table ES-2 in the BSAI and GOA FMPs)	Recent or Ongoing Council Actions
Bycatch reduction	<ul style="list-style-type: none"> <li>● Prohibited species catch limits</li> <li>● Retention and utilization requirements</li> <li>● Bycatch reduction programs</li> </ul>	<ul style="list-style-type: none"> <li>● Chum Salmon bycatch reduction measures (Feb 2025)</li> <li>● GOA Tanner Crab discussion paper (not scheduled)</li> <li>● BBRKC Closure Areas Analysis (Feb 2024)</li> <li>● BBRKC bycatch avoidance - Request for Information (Oct 2022)</li> </ul>
Protecting sensitive habitats	<ul style="list-style-type: none"> <li>● BSAI and GOA Time and Area restrictions (by gear type)</li> </ul>	<ul style="list-style-type: none"> <li>● EFH 5-year reviews (2023)</li> <li>● GOA Tanner Crab discussion paper (not scheduled)</li> <li>● BBRKC Closure Areas Analysis (Feb 2024)</li> <li>● Pelagic trawl gear performance workshop (Oct 2023)</li> <li>● Pelagic trawl gear catalog research (Ongoing)</li> </ul>
Improve Enforcement	<ul style="list-style-type: none"> <li>● Ongoing consultation, coordination, cooperation with Enforcement partners</li> <li>● Improve monitoring and enforcement data through improved technology</li> </ul>	<ul style="list-style-type: none"> <li>● Trawl Electronic Monitoring (fishing begins in Jan 2025)</li> <li>● Pelagic trawl gear definition (this action - Oct 2024)</li> </ul>
Design and adopt management measures that are adaptable to changing conditions.	<ul style="list-style-type: none"> <li>● Implementation of adaptive management measures</li> <li>● Regular and periodic review of rationalization programs</li> <li>● Programmatic analysis of FMP components</li> <li>● Adaptive monitoring (Observer and Electronic Monitoring)</li> </ul>	<ul style="list-style-type: none"> <li>● Upcoming reviews of the AFA, and Rockfish Programs (April 2025(T))</li> <li>● Trawl Electronic Monitoring (fishing begins in Jan 2025)</li> <li>● Pelagic trawl gear innovation discussion paper (not scheduled)</li> <li>● Pelagic trawl footrope exempted fishing permit (Oct 2024)</li> <li>● Programmatic Evaluation of management policies in consideration of environmental variability. (April 2025 pre-scoping report)</li> </ul>

## 1.4 Description of Management Area

This action would have implications for groundfish fisheries of the United States (U.S.) exclusive economic zone off Alaska including the Bering Sea and Aleutian Islands (BSAI) management area and the Gulf of Alaska (GOA) management area (Figure 1-1).

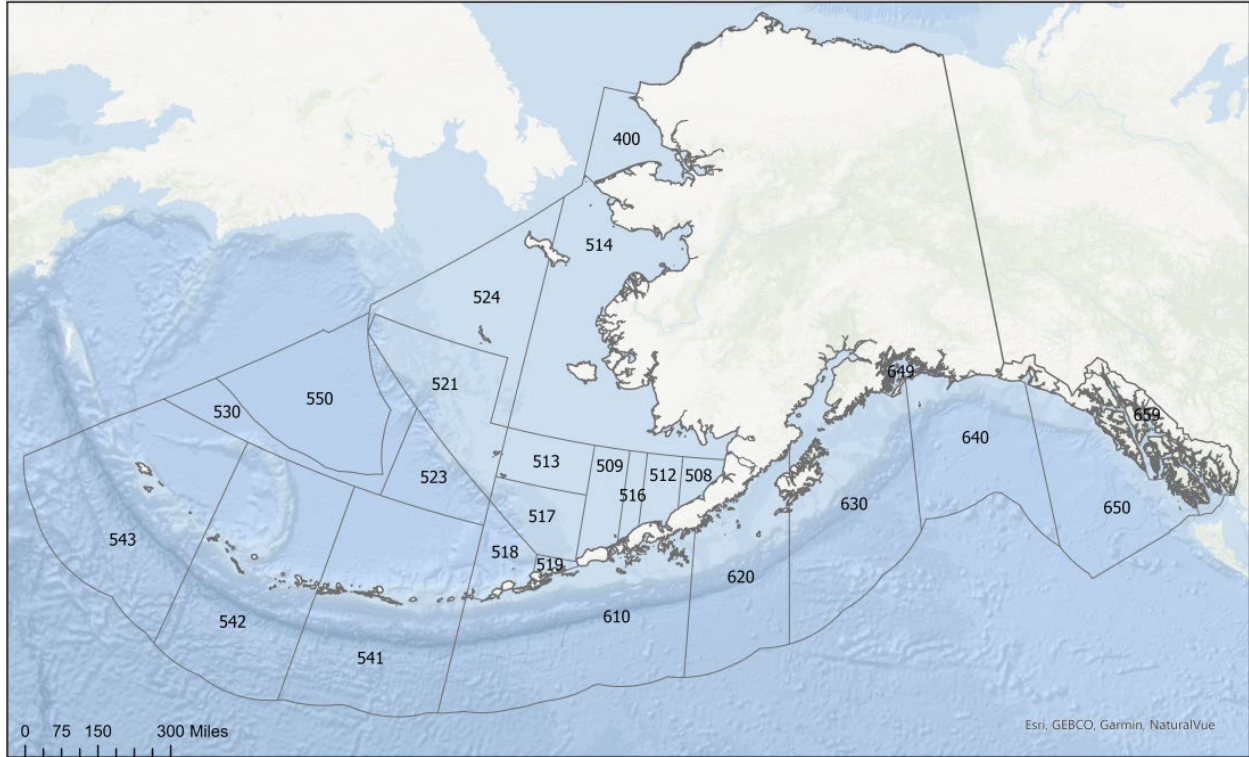


Figure 1-1. NMFS statistical areas associated with the Bering Sea-Aleutian Island and Gulf of Alaska fisheries management areas

## 1.5 RIR requirements

### Regulatory Impact Review

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

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

As part of the RIR analysis, the need for the proposal is described in Section 1.1, and the alternatives in Chapter 2. Chapter 3 provides a description of the fisheries affected by this action, Chapter 4 analyzes the

impacts of the proposed alternatives, including the impacts on small entities, and Chapter 5 addresses the management considerations relevant to the alternatives under consideration.

E.O. 12866 was amended by E.O. 14094, Modernizing Regulatory Review, by President Joe Biden (88 FR 21879, April 11, 2023). The amended E.O requires that the Office of Information and Regulatory Affairs in the Office of Management and Budget review proposed regulatory programs that are considered to be “significant.” A “significant regulatory action” is one that is likely to:

- Have an annual effect on the economy of \$200 million or greater (adjusted every 3 years for changes in gross domestic product); 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 legal or policy issues for which centralized review would meaningfully further the President’s priorities, or the principles set forth in the Executive order.

## 2 Description of Alternatives

The Council adopted the following alternatives for analysis in February 2024. The Options under Alternative 2 can be implemented individually or in any combination and are not mutually exclusive with each other.

*Alternative 1: No Action (Status quo).*

*Alternative 2: Revise regulations at 50 CFR 679.2 that define authorized fishing gear for pelagic trawl gear and trawl gear to:*

*Option 1. Exclude the codend from limitations applicable to the trawl net.*

*Option 2. Remove outdated text related to parallel line trawls.*

*Option 3. Allow the use of flotation for bycatch excluder devices.*

*Option 4. Allow hardware that secures technology to the trawl as long as the hardware does not appreciably change the intended performance of the trawl. Technology that may need to be secured to the trawl includes live-feed cameras, flow sensors, etc. (These options are not mutually exclusive.) (These options are not mutually exclusive.)*

In the following sections, the alternatives and options are described in more detail.

### 2.1 Alternative 1, No Action (Status Quo)

This alternative would maintain the definitions of “pelagic trawl gear”, “nonpelagic trawl”, and “trawl gear” as they currently exist under the definition of “authorized fishing gear” at 50 CFR Part 679.2 (status quo). The definition of “codend” at 50 CFR 600.10 would also remain unchanged. Under this alternative, the codends attached to pelagic trawl nets would continue to be subject to the limitations specified in the definition of pelagic trawl gear.

Flotation is regularly used in pelagic trawl gear codends, with many codends containing a number of floats providing 50-100 lbs of buoyancy which may support net-sounders, catch sensors, cameras, or other such technologies as needed (NPFMC and NMFS 2023a). However, under Alternative 1, flotation is only allowed in pelagic trawl gear forward of 5.5 inch stretched mesh and aft of the fishing circle to provide up to 200 lb of buoyancy to accommodate use of a net-sounder device. Some codends attached to

pelagic trawl gear nets have floats fitted the full length of both sides of the codend, spaced at intervals of 1-3 ft and providing 1,000 lbs of buoyancy or more to compensate for the weight of chain riblines and other metal components. Codends with significant amounts of flotation are frequently fitted with chain rib lines and substantial chafing gear on the bottom and sides of the codend. These codends are similar to those commonly attached to nonpelagic trawl nets (NPFMC and NMFS 2023a). Metallic components such as chain riblines in codends attached to pelagic trawl gear also do not comply with the definition of pelagic trawl gear. The common and longstanding practice of using flotation in codends attached to pelagic trawl gear would not be compliant with the definition of pelagic trawl gear, and therefore not be considered authorized gear where pelagic trawl gear is required.

Certain bycatch excluder device configurations would also be subject to the pelagic trawl gear definition. Bycatch excluder devices would continue to be limited from using metallic components other than connectors unless the device was located forward of 5.5 inch stretched mesh. As described in section 3.2.3 of this document, some excluder designs include use of a weighted panel. If the weighted panel contains metallic components other than connectors, it would not be compliant with the current definition of pelagic trawl gear.

The current definition states that the only metallic components allowed in a pelagic trawl gear are connectors and a net-sounder device, and these can only be located forward of 5.5 inch stretched mesh and aft of the fishing circle. It further states exceptions to this rule for the use of weights on pelagic trawl gear wingtips and allows for two weighted lines forward of the fishing circle: the footrope and fishing line (reference section 3.1). This means that currently, only metal connectors and one net-sounder device may be placed on pelagic trawl gear, provided they are placed aft of the fishing circle and forward of any mesh greater than 5.5 inches stretched measure. All electronic technologies include metallic components and are therefore limited by the current definition of pelagic trawl gear, with the exception of the net-sounder. Although the definition explicitly allows for the attachment of a net-sounder to pelagic trawl gear, the definition does not explicitly allow the use of any other type of electronic technologies such as cameras, catch sensors, bottom contact sensors or any other instrumentation.

It is common for vessels using pelagic trawl gear to attach technology such as catch sensors or live feed cameras to the codend or the pelagic trawl net. The pelagic trawl gear definition specifically allows for one net-sounder device to be attached to the net aft of the fishing circle and forward of any mesh greater than 5.5 inches stretched measure. Paragraph (14)(ix) specifically allows the use of small mesh to be used for attaching “instrumentation” in an area of the net where small mesh is otherwise prohibited. Multiple catch sensors are often mounted on top of the net along the length of the codend and sometimes in the section forward of the codend, indicating filling or catch rate so the vessel operator knows when to haul in the trawl net (C. Rose, personal communication, FishNext Research, Founder and Principal Scientist, November 8, 2024). The use of these technologies is generally understood to be a benefit to vessel operators because they can help the vessel operator identify bycatch that is entering the net or indicate when the codend is full triggering the captain to haul in the net. These data are helpful to the vessel operator in making real-time decisions while fishing and in targeting specific species while avoiding others. However beneficial these technologies may be, the use of them in pelagic trawl gear is inconsistent with the current regulatory definition that limits allowable metallic components to connectors and a net-sounder device.

In the forward portion of pelagic trawl gear (portion of the net starting at the fishing line and extending aft for a distance equal to or greater than one-half the vessel’s length), mesh size and parallel lines are limited in size and must exceed the minimum size or spacing stated in regulation. Paragraph (ix) of the definition of pelagic trawl gear contains an exception to the mesh size limits in the forward portion of the net to allow the use of small mesh to attach a net-sounder device.

Use of parallel line trawls, also known as “rope” trawls are limited under paragraph (iii)(B) of the definition of pelagic trawl gear. Rope trawls are obsolete in North Pacific trawl fisheries and are no longer used. Under alternative 1, this paragraph would remain.

The definition of nonpelagic trawl would remain unchanged under Alternative 1. Nonpelagic trawl gear would continue to be defined as a trawl other than pelagic trawl gear. Because this gear has such a broad and inclusive definition, this type of gear is not subject to design limitations that apply to pelagic trawl gear. This allows any type of codend and bycatch excluder device to be used on a nonpelagic trawl.

## **2.2 Alternative 2, Revise the definition of pelagic trawl gear.**

The Council motion *Alternative 2: Revise regulations at 50 CFR 679.2 that define authorized fishing gear for pelagic trawl gear and trawl gear to:*

This alternative would modify specific provisions included in the definitions of “pelagic trawl gear”, “nonpelagic trawl”, or “trawl gear” under the “authorized fishing gear” definition at § 679.2. This alternative includes four options. The options can be selected individually or in any combination. For each option the Council may select, specific regulatory changes would be necessary as described below.

The definition of nonpelagic trawl would not need to be changed in regulation, however any change to the definition of pelagic trawl gear would impact the meaning of the nonpelagic trawl definition. Nonpelagic trawl gear would continue to be defined as “a trawl other than a pelagic trawl.” Because nonpelagic trawl has such a broad and inclusive definition, this type of gear is not subject to design limitations that apply to pelagic trawl gear. This allows any type of codend and bycatch excluder device to be used in a nonpelagic trawl net.

### **2.2.1 Option 1. Exclude the codend.**

*Alternative 2, Option 1 would exclude the codend from limitations applicable to the trawl net.* Under this option, the codend would be excluded from the definition of pelagic trawl gear under “authorized fishing gear” in § 679.2. The limitations set out in the definition of pelagic trawl gear would only apply to the portion of the trawl net forward of the codend. This would allow common codend designs to comply with the definition of pelagic trawl gear, including the use of flotation, metallic components such as chain or wire rope riblines, and attaching catch sensors to the codend.

Limiting codend design as specified in the current definition of pelagic trawl gear (when read in combination with the definition of “codend” at § 600.10) does not serve a conservation purpose or gear performance purpose. Commonly used components such as flotation, metallic components, and catch sensors are necessary for the effective operations of pelagic trawl gear. This regulatory change would be consistent with Council and NMFS management goals for the groundfish fisheries off Alaska.

### **2.2.2 Option 2. Remove outdated language.**

*Option 2 would remove outdated text related to parallel line trawls.*

Under Alternative 2, Option 2, regulatory text within the pelagic trawl gear definition under “authorized fishing gear” in § 679.2 would be modified to remove restrictions related to parallel line trawls also known as “rope trawls”. Rope trawls are an obsolete type of pelagic trawl gear in North Pacific groundfish fisheries. As such, relevant language – namely, paragraph (iii)(B) of the pelagic trawl gear definition – could be removed. This option would not conflict with NMFS management goals for the groundfish fisheries off Alaska.

In the event the gear type resurfaces in the future, parallel line trawls would still be regulated by the pelagic trawl gear and nonpelagic trawl definitions.

### 2.2.3 Option 3. Allow flotation within bycatch excluder devices.

*Option 3 would allow the use of flotation for bycatch excluder devices.*

Alternative 2, Option 3 would modify regulatory text within the pelagic trawl gear definition under “authorized fishing gear” in § 679.2 to allow flotation to be used in bycatch excluder devices. Current regulations that limit flotation may be contrary to conservation goals to reduce bycatch to the extent practicable, as flotation can be necessary to the design and proper function of bycatch excluder devices. Option 3 would explicitly allow the use of flotation in bycatch excluder devices located on the trawl net aft of 5.5 inch stretched mesh in paragraph (vi) of the definition of pelagic trawl gear. For instance, salmon excluder devices have been developed and tested through the EFP process with excluder designs evolving over time as innovations occur. Flotation can be important to the form, function and continued improvement of bycatch excluders to reduce bycatch in support of sustainable fisheries (See section 3.2.3). Some bycatch excluder devices may also use metallic components other than connectors such as weighted panels, lights, or live feed cameras. Under Option 3, metallic components would continue to be limited in bycatch excluder devices as specified in the current definition of pelagic trawl gear.

Inshore cooperatives, CDQ groups, AFA catcher processor entities and entities representing the AFA mothership sector participate in salmon bycatch incentive plan agreements (IPAs) within the BS pollock fishery (§ 679.21(f)(12)) with requirements of utilizing salmon excluder devices, with recognition of contingencies. However, pelagic trawl gear as defined under “authorized fishing gear” in § 679.2 does not presently specify exemptions for bycatch excluder devices. This action would be in line with current industry efforts and longstanding management goals of reducing prohibited species bycatch in trawl fisheries. Additionally, because nonpelagic trawl is defined as a trawl other than a pelagic trawl, this means that bycatch excluder devices used in nonpelagic trawls are not limited in their design.

### 2.2.4 Option 4. Hardware to secure technology

*Option 4. would allow hardware that secures technology to the trawl as long as the hardware does not appreciably change the intended performance of the trawl. Technology that may need to be secured to the trawl includes live-feed cameras, flow sensors, etc.*

Alternative 2, Option 4 would require changes to the regulatory text within the pelagic trawl gear definition under “authorized fishing gear” in § 679.2. **NMFS requests clarification how this option is intended to be implemented.** As stated in the purpose and need for this action, regulatory changes are necessary to update the pelagic trawl gear definition to allow the use of gear designs that are commonly used by fishery participants and that meet conservation and management goals for pelagic trawl fisheries in the BSAI and GOA.

As described in section 2.1, metallic components (and technology that uses metallic components) are currently limited by paragraph (viii) in the definition of pelagic trawl gear and are already allowed to secure a net-sounder device.

The Council’s motion specifies that this option is intended to explicitly allow hardware to attach cameras, flow sensors, or other technology to pelagic trawl gear, provided the hardware does not appreciably change the performance of the trawls. It is clear that this option is intended to allow the use of hardware to attach technology, **however it is not clear if “hardware” differs from metallic components, (e.g. hammerlocks or swivels) that are already limited in the definition. If hardware is not different from metallic components, then is this option intended to allow use of metallic components? Also, analysts seek direction on the specific area of the pelagic trawl in which this hardware is intended**

**to be used.** Does this option allow hardware to attach technology anywhere in the net, or aft of the fishing circle and forward of 5.5 inch stretched mesh?

Second, **analysts request clarity on the range of technology that the Council intends to be allowed to be attached to a pelagic trawl.** As described in section 2.1, to the degree that commonly used technology includes metallic components (which are included in all electronic technologies such as cameras, flow sensors, etc.) regulations would need to be revised to allow the attachment of such technology to pelagic trawl gear. Analysts are aware of the following electronic technologies that are commonly used on pelagic trawl gear: catch sensors, live feed cameras, and net-sounders. There may be additional instrumentation or electronic technologies that are commonly used in pelagic trawl gear, however there is limited information on the complete scope of such technologies. Without clarification from the Council, this option would only allow hardware to attach one net-sounder device to the net. Use of technology (other than a net-sounder device) that includes metallic components would continue to be limited by the existing definition of pelagic trawl gear.

Third, any hardware used to secure technology is not intended to appreciably change the performance of the trawl. To implement this as an enforceable standard, NMFS would need to be able to determine when net performance is altered, and specifically when that altered performance is caused by hardware used to attach technology to the net.



## 2.3 Summary of the Alternatives

Table 2-1. Summary of Alternatives and Options

Alternative	Description
Alt 1: No Action	<p>Regulations remain unchanged. Commonly used gear configurations and components would continue to be non-compliant with the definition of pelagic trawl gear at § 679.2 resulting in potential enforcement action for the use of:</p> <ul style="list-style-type: none"> <li>● flotation, metallic components, and technology attached to the codend</li> <li>● use of metallic components, except for metallic components that are connectors (e.g., hammerlocks or swivels) and one net-sounder, which are located aft of the fishing circle and forward of any mesh greater than 5.5 inches stretched measure</li> <li>● use of technology, other than a net-sounder device that comports with paragraph (viii) of the definition of “pelagic trawl gear”</li> </ul>
Alt 2 Option 1: Exclude Codend	<p>Regulations in paragraph 14 of the definition of “authorized fishing gear” at § 679.2 would be modified to explicitly exclude the codend from pelagic trawl gear limitations.</p> <ul style="list-style-type: none"> <li>● Metallic components, flotation, and any technology could be used freely in codend design.</li> <li>● Metallic components, including connectors, would continue to be limited in the portion of the net aft of the fishing circle and forward of mesh measuring 5.5 inches as specified in the current definition of pelagic trawl gear.</li> </ul>
Alt 2 Option 2: Remove parallel line trawls	<p>Regulations in paragraph (14)(iii)(B) of the definition of “authorized fishing gear” at § 679.2 would be modified to remove gear restrictions related to parallel line trawls as a variation of pelagic trawl gear.</p>
Alt 2 Option 3: Allow flotation for excluders	<p>Regulations in paragraph (14)(vi) of the definition of “authorized fishing gear” at § 679.2 would be modified to explicitly allow flotation for bycatch excluder devices in the pelagic trawl gear definition.</p> <ul style="list-style-type: none"> <li>● Use of metallic components (which could include technology) would continue to be limited in bycatch excluder devices as specified in the current definition of pelagic trawl gear at paragraph 14(viii).</li> </ul>
Alt 2 Option 4: Allow hardware to secure technology	<p>Regulations in paragraph (14)(viii) of the definition of “authorized fishing gear” at § 679.2 would be modified to allow hardware that secures technology to pelagic trawl nets as long as the hardware does not appreciably change the intended performance of the trawls.</p> <p>Analysts request clarity on:</p> <ul style="list-style-type: none"> <li>● Does “hardware” differ from “metallic components” (e.g. hammerlocks or swivels) that are already limited in the definition.</li> <li>● What range of technology does the Council intend to be allowed to be attached to a pelagic trawl gear and is the use of technology limited to any specific area/location/portion of pelagic trawl gear?</li> <li>● Direction on how to distinguish hardware that “appreciably changes the performance of the trawl.”</li> </ul>

### 3 Description of Definitions, Gear Type, Fisheries, and Associated Area Closures

This section describes the definitions of pelagic trawl gear, trawl gear, and the codend. Trawl gear descriptions and associated fleet profiles are discussed in relation to the BSAI and GOA fisheries management areas. Nonpelagic trawl gear is also described, as it is the direct inverse of pelagic trawl gear. Bycatch excluder device development, configurations and components are further discussed in section 3.2.3. This section also describes the directly regulated fisheries that would be impacted by the management alternatives. The Bering Sea pollock fishery is the only fishery in which pelagic trawl gear is required to be used in regulations. Vessels targeting Pacific ocean perch (POP) in the Bering Sea and Gulf of Alaska are included as well as vessels targeting pollock in the Gulf of Alaska, as they use pelagic trawl gear when targeting these species in certain areas that are closed to directed fishing with nonpelagic trawl gear. However, these fleets are not required by regulation to use pelagic trawl gear except when fishing within certain static closure areas such as Type I and Type II closures in the Gulf of Alaska or the Red King Crab Savings Area in the Bering Sea. As such, habitat closure zones and gear limitations are discussed in this section. Related pelagic trawl gear definitions in adjacent jurisdictions are also included for reference.

The purpose of these descriptions is to establish a regulatory baseline and allow analysis of the action alternatives against those baseline conditions. The effects of this action will be discussed qualitatively in terms of how the action is expected to alter fleet behavior.

#### 3.1 Relevant Regulatory Definitions

##### 50 CFR 600.10

\* \* \* \* \*

*Codend* means the terminal, closed end of a trawl net.

\* \* \* \* \*

*Trawl* means a cone or funnel-shaped net that is towed through the water, and can include a pair trawl that is towed simultaneously by two boats.

\* \* \* \* \*

##### 50 CFR 679.2

*Authorized fishing gear* (see also [§ 679.24](#) for gear limitations and Table 15 to this part for gear codes) means trawl gear, fixed gear, longline gear, pot gear, and nontrawl gear as follows:

\* \* \* \* \*

(12) *Nonpelagic trawl* means a trawl other than a pelagic trawl.

\* \* \* \* \*

(14) *Pelagic trawl gear* means a trawl that:

(i) Has no discs, bobbins, or rollers;

(ii) Has no chafe protection gear attached to the footrope or fishing line;

(iii) Except for the small mesh allowed under paragraph (14)(ix) of this definition:

(A) Has no mesh tied to the fishing line, headrope, and breast lines with less than 20 inches (50.8 cm) between knots and has no stretched mesh size of less than 60 inches (152.4 cm) aft from all

points on the fishing line, headrope, and breast lines and extending passed the fishing circle for a distance equal to or greater than one half the vessel's LOA; or

(B) Has no parallel lines spaced closer than 64 inches (162.6 cm) from all points on the fishing line, headrope, and breast lines and extending aft to a section of mesh, with no stretched mesh size of less than 60 inches (152.4 cm) extending aft for a distance equal to or greater than one-half the vessel's LOA;

(iv) Has no stretched mesh size less than 15 inches (38.1 cm) aft of the mesh described in paragraph (14)(iii) of this definition for a distance equal to or greater than one-half the vessel's LOA;

(v) Contains no configuration intended to reduce the stretched mesh sizes described in paragraphs (14)(iii) and (iv) of this definition;

(vi) Has no flotation other than floats capable of providing up to 200 lb (90.7 kg) of buoyancy to accommodate the use of a net-sounder device;

(vii) Has no more than one fishing line and one footrope for a total of no more than two weighted lines on the bottom of the trawl between the wing tip and the fishing circle;

(viii) Has no metallic component except for connectors (e.g., hammerlocks or swivels) or a net-sounder device aft of the fishing circle and forward of any mesh greater than 5.5 inches (14.0 cm) stretched measure;

(ix) May have small mesh within 32 ft (9.8 m) of the center of the headrope as needed for attaching instrumentation (e.g., net-sounder device); and

(x) May have weights on the wing tips.

\* \* \* \* \*

(18) **Trawl gear** means a cone or funnel-shaped net that is towed through the water by one or more vessels. For purposes of this part, this definition includes, but is not limited to, beam trawls (trawl with a fixed net opening utilizing a wood or metal beam), otter trawls (trawl with a net opening controlled by devices commonly called otter doors), and pair trawls (trawl dragged between two vessels) and is further described as pelagic or nonpelagic trawl.

\* \* \* \* \*

## 3.2 Trawl Gear Descriptions

### 3.2.1 Nonpelagic Trawl Gear

Pelagic trawl gear is defined in paragraph 14 of the definition of authorized fishing gear in § 679.2 and is utilized by pollock fisheries in the BSAI and Gulf of Alaska (GOA) as well as trawl rockfish fisheries, primarily POP, in the GOA. The BS pollock fishery is managed under the American Fisheries Act (AFA) management program and the trawl rockfish fisheries in the GOA are managed under the Central Gulf of Alaska Rockfish Program. Currently, an up-to-date catalog of current pelagic trawl gear specifications or variations for vessels fishing Alaskan waters does not exist. Some data could be provided from an ongoing collaborative research effort between Alaska Pacific University (APU) and the Alaskan pollock fleet to catalog gear specifications, develop models estimating pelagic trawl - seabed interactions, and develop a field study design to measure seabed contact and clearance of pelagic trawl gear under real

fishing conditions (Harris et al. in prep, see section 1.3). In lieu of published results from this project, known gear descriptions from the 2012 Fishing Fleet Profiles report (NPFMC 2012) are useful to understand variations within pelagic trawl gear. Vessels utilizing pelagic trawls include American Fisheries Act (AFA) catcher vessels and catcher/processors in the BSAI targeting Alaskan pollock, as well as trawl catcher vessels targeting Alaskan pollock and some rockfish in the Western and Central GOA.

For context, select trawl gear components and associated descriptions are listed in Table 1-1 and labeled in Figure 3-1. These descriptions, derived from 50 CFR Part 600, Part 660, Part 679 and staff interpretations based on discussions with industry participants, could be useful in beginning to develop a shared understanding and vocabulary for these common trawl components.

Table 3-1. Trawl gear components and descriptions organized from forward to aft (front to back) of a trawl.

Term	Generalized Description
Warp	A line (usually cable) passing through a vessel's block used in towing a trawl net.
Trawl Doors (Otter Doors)	Large hydrodynamic metal plates used to spread the net horizontally, pull the net downward, and keep the trawl mouth open. Positioned between the warp and the bridles.
Sweeps (sweep lines)	Generally used on bottom trawls; lengths of wire between the bridle and trawl doors used to sweep along the ocean bottom and herd fish into the net.
Bridle	A section of cable between trawl door and net; for pelagic trawl gear, cables attached from the door to the trawl wingtips / clump weights.
Clump Weights	Weights attached to trawl wingtips, usually clumps of heavy anchor chain.
Set Back Chain	A short length of chain connecting the bridle and clump weight to the bottom trawl wing, used to adjust and align the trawl "mouth".
Wing tip	The point where adjacent breast lines intersect or where a breast line intersects with the fishing line. (50 CFR 679.2)
Wing	The portions of the net extending forward laterally from the fishing circle.
Footrope	A chain, rope, or wire attached to the bottom front end of the trawl webbing forming the leading edge of the bottom panel of the trawl net, and attached to the fishing line. (50 CFR 679.2)
Trawl Fishing Line	A length of chain, rope, or wire rope in the bottom front end of a trawl net to which the webbing or lead ropes are attached. (50 CFR 679.2)
Headrope	A rope bordering the top front end of a trawl. (50 CFR 679.2)
Breastline	A rope or cable that connects the end of the headrope and the end of the trawl fishing line along the edge of the trawl web closest to the towing point. (50 CFR 660.11)
Vertical Net Opening	The headrope to footrope vertical distance rise, highest point of the

Term	Generalized Description
	net to the lowest point of the net while fishing; generally at the fishing circle.
Fishing Circle	The circumference of a trawl intersecting the center point on a fishing line, and that is perpendicular to the long axis of a trawl. (50 CFR 679.2)
net-sounder Device	A sensor used to determine the depth from the water surface at which a fishing net is operating. (50 CFR 679.2)
Body	The main portion of the net, not including wings, codend, or intermediate.
Selvedge Line	A lateral line running horizontally along the net where mesh panel sections are stitched together.
Ribline	A heavy rope or line that runs down the sides, top, or underside of a trawl net from the mouth of the net to the terminal end of the codend to strengthen the net during fishing. (50 CFR 660.11)
Trawl Gear	A cone or funnel-shaped net that is towed through the water by one or more vessels. For purposes of this part, this definition includes, but is not limited to, beam trawls (trawl with a fixed net opening utilizing a wood or metal beam), otter trawls (trawl with a net opening controlled by devices commonly called otter doors), and pair trawls (trawl dragged between two vessels) and is further described as pelagic or nonpelagic trawl. (50 CFR 679.2)
Intermediate	The portion of the trawl net aft of the body and forward of the codend, generally tapered from the larger net into a smaller diameter portion joining to the codend.
Bycatch Reduction Device (excluder)	A modification or piece of equipment that allows unwanted marine species to escape from a trawl net or prevents them from being caught.
Live feed camera	A camera that transmits a continuous video feed over the internet or a local network.
Codend	The terminal, closed end of a trawl net. (50 CFR 600.10)
Chafing Gear	Webbing or other material that is attached to the trawl net to protect the net from wear and abrasions either when fishing or hauling on deck. (50 CFR 660.11)

As described in the NPFMC’s 2012 fleet profiles, AFA catcher/processor pelagic trawl gear specifications are generally similar to those used by AFA catcher vessels, but larger. Both vessel types utilize trawl gear with large net openings and minimal drag due to large mesh sizes and relatively small twine size. Trawl gear size varies based on vessel size and horsepower, such that the larger and more powerful vessels tow larger trawls. Meshes in the front end of the trawl can be as large as 105-ft (32-m) to 210-ft (64-m) and typically have a vertical net opening (headrope to footrope vertical distance) rise of 60-ft (18.3-m) to 180-ft (54.8-m). Net mesh gets smaller towards the intermediate and codend, with codends typically having 4-in (10.2-cm) to 4.5-in (11.43-cm) stretched mesh. Otter boards (or doors) are made of steel and range in

size from 16.4-ft<sup>2</sup> (5-m<sup>2</sup>) to 45.9-ft<sup>2</sup> (14-m<sup>2</sup>). Door spread in most fishing depths ranges from 328-ft (100-m) to 590-ft (180-m), and trawl warp/scope to depth ratio is typically 3 to 1. Clump weights, trawl doors, or the footrope may contact the seafloor for a period of time within a tow, the duration of which varying depending on how the net is fished. Long wire rope bridles attach the net to the doors, and there are no discs, rollers, or bobbins attached to the trawl footrope of a pelagic trawl. Footropes typically extend 590-ft (180-m) to 1,475-ft (450-m). Trawl codends are usually made with polyethylene netting attached to four longitudinal riblines. The riblines are typically chain, wire, or synthetic rope. Floats can be attached along the length of the codend to counteract the weight of the steel components. Container lines around the circumference are attached along the length of the codend to restrict the expansion of the netting, preventing damage and allowing the codend to be hauled up a stern ramp (NPFMC 2012).

Western and Central GOA trawlers consist of smaller catcher vessels (58 to 99 ft LOA) as well as large catcher/processors. Smaller vessels generally use smaller sized pelagic trawls compared with CPs when fishing for pollock that take less horsepower to tow. GOA pelagic trawls typically have a vertical net opening of 120-ft (36.6-m) and a horizontal opening of 240-ft (73.2-m) (wing-end spread of 360-ft (109.7-m)) for vessels with an average 1,000 hp. Front meshes of large mid-water nets may be as large as 120-ft (36.6-m). Net mesh gets smaller towards the intermediate and codend, with the codend typically having 5-inch (12.7-cm) stretched mesh. Doors are made of steel and range in size from 9.8-ft<sup>2</sup> (3-m<sup>2</sup>) up to 22.9-ft<sup>2</sup> (7-m<sup>2</sup>). Door spread in most fishing depths and trawl warp/scope combinations is typically 328 ft (100-m) to 590 ft (180-m) (NPFMC 2012).

For both BSAI and GOA vessels, there are no discs or bobbins attached to the footropes on pelagic trawls. Trawls may be fitted with multiple sonar systems designed to monitor net performance remotely. These third wire - or wireless with more recent technology - systems improve fishing efficiency and help vessel operators avoid net damage. Figure 3-1. Generalized pelagic trawl gear and labeled components. Image modified from Swan Net Gundry is a labeled figure showing a generalized pelagic trawl gear configuration with labeled components.

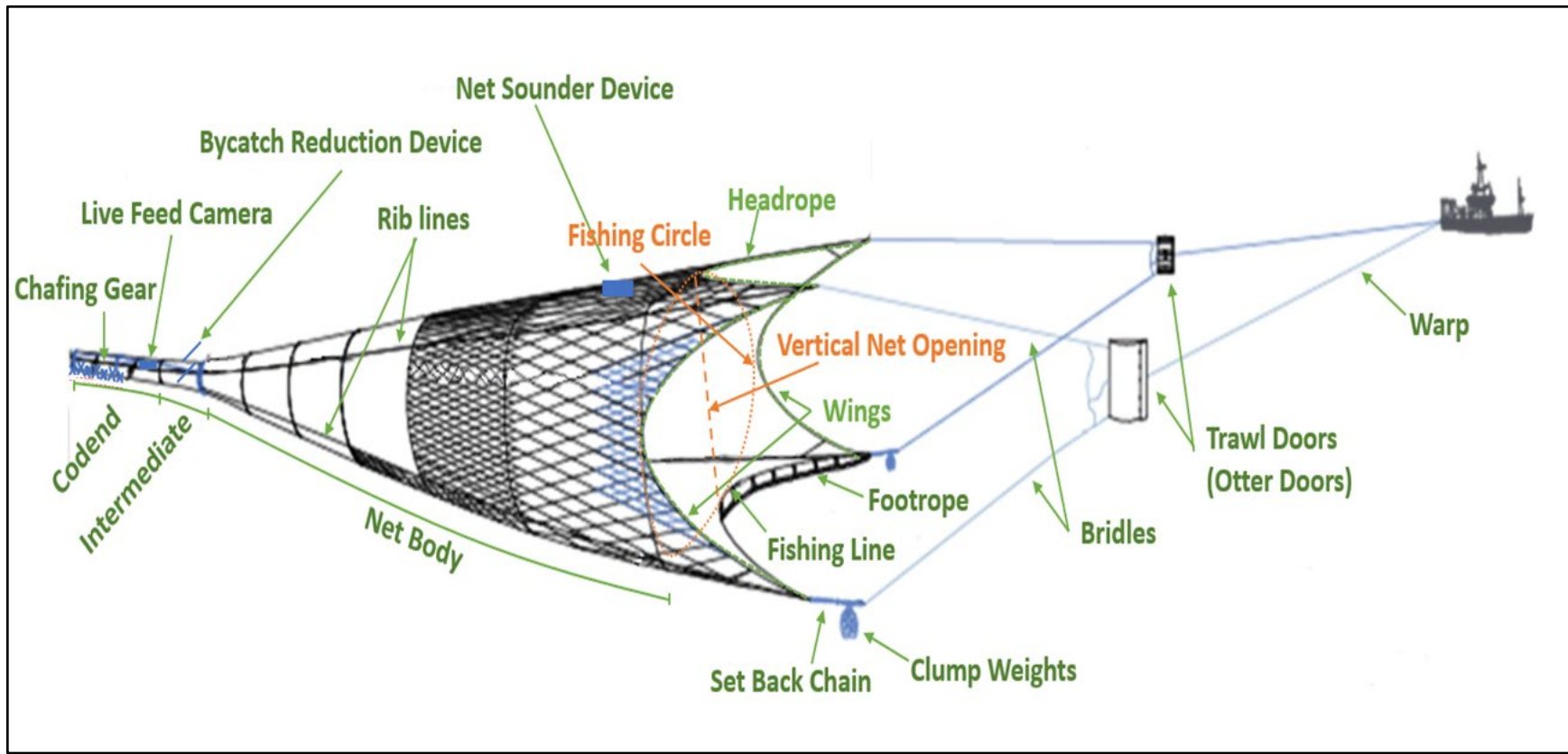


Figure 3-1. Generalized pelagic trawl gear and labeled components. Image modified from: Swan Net Gundry

### 3.2.2 Nonpelagic trawl gear

Nonpelagic trawl gear is all trawl gear that does not meet the definition of pelagic trawl gear and is defined in federal regulation as “a trawl other than a pelagic trawl” (§ 679.2 “Authorized fishing gear”). Fisheries using this gear type include non-AFA trawlers targeting Pacific cod in the Bering Sea, the Amendment 80 fleet targeting flatfish, Pacific cod, Atka mackerel and Pacific ocean perch in the Bering Sea and Aleutian Islands, as well as Gulf of Alaska trawlers targeting Pacific cod, flatfish, and rockfish. Nonpelagic trawl gear contains characteristics not found in pelagic trawl gear such as discs, bobbins, or rollers to raise the footrope off the seabed, as well as flotation within codends. Mesh size is generally much smaller in the forward section of a nonpelagic trawl when compared to pelagic trawl gear.

### 3.2.3 Bycatch Excluder Devices

Since 2001, conservation engineering scientists have worked cooperatively with Alaska fishing industry partners, gear manufacturers, and the trawl fleet to design and test bycatch excluder devices to exclude prohibited species catch such as salmon from pelagic trawls or halibut from bottom trawls. Through experimental fishery permits authorized by the Council and NOAA Fisheries, various iterations have been tested, and voluntary use of salmon bycatch excluders by pollock skippers is increasing. The pollock fishery operating in the Gulf of Alaska has worked to adapt the excluder device for use in the smaller Gulf fleet. Much of this work has been conducted by the Alaska fishing industry under Exempted Fishing Permits (EFP’s) with some help from the Conservation Engineering (CE) group (NPFMC 2024).

Excluders are located towards the back of trawl gear in the net just forward of the codend. Excluder design has varied greatly based on the species being targeted for release. Variations have included using floats to create openings for salmon to escape on the dorsal and ventral sides of the net, lighting to attract salmon to swim out of the excluder, a weighted “flapper” panel that closes access to the opening while towing and opens for salmon to escape during slow down periods, turns or during haulback.

Previous EFP work has shown that excluder performance varies based on vessel size and horsepower. Bycatch excluder device research and innovations continue with goals to improve reduction of PSC. One such variation currently under development includes metal components, a live feed camera, and a hydrofoil or kite mounted ahead of the codend (C. Rose, personal communication, FishNext Research, Founder and Principal Scientist, November 8, 2024).

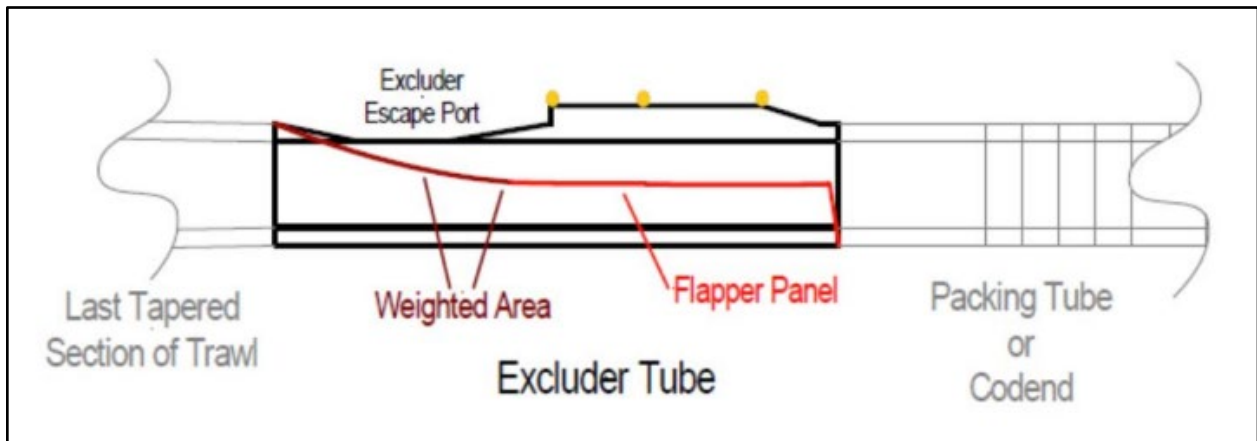


Figure 3-2. Example of a salmon excluder device tested in spring 2013. Image credit: EFP 13-01 Final Report



### 3.3 Fisheries Descriptions

This section provides a brief overview of fisheries that have historically used pelagic trawl gear. Pelagic trawl gear is used to catch Bering Sea Pollock, Bering Sea and Aleutian Islands Pacific Ocean Perch, Gulf of Alaska Pollock, and Gulf of Alaska Pacific Ocean Perch. Only the Bering Sea pollock fishery has regulations requiring the use of pelagic trawl gear. All other fisheries with historical use of pelagic trawl gear are done at the vessel operator’s discretion. In some discrete areas, spatial closure areas prohibit the use of nonpelagic trawl gear. These areas are discussed in section 3.4.

#### 3.3.1 Bering Sea Pollock

The Bering Sea pollock fishery is the directly regulated entity under the proposed action and is required by regulation to use pelagic trawl gear. Fishery regulations mandate the use of pelagic trawl gear for directed fishing for pollock in the BSAI (50 CFR 679.24(b)(4)). The NMFS Observer Program provides near real-time catch data during the season and vessels operate within well-defined catch limits. The Bering Sea pollock fishery is the largest U.S. fishery by volume. From 2011 through 2022, the average annual harvest of Bering Sea pollock by all sectors was 1.28 million mt. Bering Sea pollock is typically not sold fresh but instead processed into a variety of product forms, the most significant of which are fillets, surimi, and roe. In 2021 and 2022, the total gross first wholesale value of the Bering Sea pollock fishery harvest was \$1.5 billion.

The management structure of the Bering Sea pollock fishery substantially changed in 1998 with the passage of the American Fisheries Act (AFA). Prior to the AFA, vessel participation in the Bering Sea pollock fishery was restricted by the existing limited license permit program which endorsed BSAI groundfish licenses by gear type but not by species. Any trawl vessel could enter the pollock fishery if they had a trawl limited license permit. The AFA identified vessels and processors eligible to participate in the Bering Sea pollock fishery and allocated specific percentages of the total allowable catch (TAC) among four different fishery sectors (see sections 206(a) and (b) of the AFA).

The Bering Sea pollock TAC is further apportioned seasonally: 45% to the A season (occurring January 20 to June 10) and 55% to the B season (occurring June 10 to November 1). Prior to Amendment 110 to the BSAI Groundfish FMP, 40% of the Bering Sea pollock TAC was apportioned in the A season and 60% was apportioned in the B season. The Bering Sea pollock fishery targets pre-spawning pollock for their roe in the A season. Fishing typically starts near the regulatory opening and extends into early to mid-April. The B season fishery focuses on targeting pollock for fillet and surimi markets, and the fleet harvests most of the B season TAC during June through early October. Fishing effort in the A season is usually concentrated north and west of Unimak Island, depending on ice conditions and fish distribution. However, there has historically been fishing effort along the Bering Sea shelf edge at the 100-meter depth contour and deeper between Unimak Island and the Pribilof Islands, although the general pattern has varied over time (Ianneli et al., 2022). Fishing effort in the B season is more dispersed with recent years’ fishing effort occurring in the southeast portion of the Bering Sea shelf.

Table 3-2. Number of vessels using pelagic trawl gear and annual catch by pelagic trawl gear in the Bering Sea pollock fishery from 2019 - 2023.

	2019	2020	2021	2022	2023
Number of Vessels	142	165	140	107	103
Total Catch (mt)	1,383,891	1,342,964	1,353,101	1,067,532	1,267,464

### 3.3.2 Bering Sea Pacific Ocean Perch

Pacific ocean perch (POP) in the Bering Sea have been targeted using pelagic trawl gear in the past, however in recent years the fishery has not used pelagic gear. There are no regulations that require the use of pelagic trawl gear to target BS POP. As such, they are not discussed further in this analysis beyond this brief overview.

POP were highly sought by Japanese and Soviet fisheries and supported a major trawl fishery throughout the 1960s. Catches in the eastern Bering Sea peaked at 47,000 (metric tons, mt) in 1961; the peak catch in the Aleutian Islands region occurred in 1965 at 109,100 t. These stocks were not productive enough to support such large removals. Catches continued to decline throughout the 1960s and 1970s, reaching their lowest levels in the mid-1980s. With the gradual phase-out of the foreign fishery in the 200-mile U.S. Exclusive Economic Zone (EEZ), a small joint-venture fishery developed but was soon replaced by a domestic fishery by 1990. In 1990 the domestic fishery recorded the highest POP removals since 1977. In some years, POP were managed in the “POP complex” management group, which also included rougheye rockfish, shorttraker rockfish, northern rockfish, and sharpchin rockfish. Beginning in 2002 POP were managed as a single stock across the BSAI (with the ABC subdivided between the EBS and AI subareas), and the BSAI OFLs, ABCs, TACs, and catches from 2002 to 2022 is discussed further in the 2022 NPFMC Bering Sea and Aleutian Islands SAFE (Spencer and Ianelli 2022).

### 3.3.3 Gulf of Alaska Pollock

Vessels targeting Alaska pollock in the Gulf of Alaska are not required by regulation to fish with pelagic trawl gear. They are discussed in this analysis because it is the primary gear type used for the fishery. The pollock target fishery in the Gulf of Alaska is entirely shore-based with approximately 96% of the catch taken with pelagic trawls. The only condition in which vessels targeting GOA pollock would be required to use pelagic trawl gear is during operations in Type I and Type II closures or other spatial closure areas identified in section 3.3.

The commercial fishery for walleye pollock in the Gulf of Alaska started as a foreign fishery in the early 1970s (Megrey 1989). Catches increased rapidly during the late 1970s and early 1980s. A large spawning aggregation was discovered in Shelikof Strait in 1981, and a fishery developed for which pollock roe was an important product. The domestic fishery for pollock developed rapidly in the Gulf of Alaska with only a short period of joint venture operations in the mid-1980s. The fishery was fully domestic by 1988. During winter, fishing effort targets pre-spawning aggregations in Shelikof Strait and near the Shumagin Islands. Fishing in summer is less predictable, but typically occurs in deep-water troughs on the east side of Kodiak Island and along the Alaska Peninsula (Monnahan et al. 2023). Beginning in 1998, full retention of pollock is required under the improved retention/improved utilization program.

Table 3-3. Number of vessels using pelagic trawl gear and annual catch by pelagic trawl gear in the Gulf of Alaska pollock fishery from 2019 through 2023.

	2019	2020	2021	2022	2023
Number of Vessels	62	61	57	54	52
Total Catch (mt)	116,705	103,802	99,524	133,657	135,733

### 3.3.4 Gulf of Alaska Pacific ocean perch (POP)

Pacific ocean perch (POP) is a pelagic rockfish species that is managed in the Central GOA rockfish program. Although vessels targeting POP in the Gulf of Alaska are not required by regulation to fish with pelagic trawl gear, they are discussed in this analysis because many vessels utilize pelagic trawl gear (Table 3-4). The only condition in which vessels targeting GOA POP are required to use pelagic trawl gear occurs during operations in habitat and gear limitations zones identified in section 3.4. These areas prohibit the use of nonpelagic trawl gear and thus limit trawling activity to vessels using pelagic trawl gear within the confines of that specific area. For example, the zone 1 and zone 2 closures near Kodiak. There is very limited POP fishing that occurs in any of the areas identified in section 3.4. As such, they are not discussed further in this analysis beyond this brief overview.

The trawl fishery for POP in the Gulf of Alaska began with foreign fleets (mostly U.S.S.R. and Japan) in the early 1960's. Catches peaked in 1965 with total landings at 350,000 t. This apparent overfishing resulted in a gradual but substantial decline in total catch, bottoming out in 1985. The domestic fishery first became important in 1985 and expanded each year alongside increased quotas until 1991. Since 1996, catches of POP have increased again, as good recruitment and increasing biomass for this species have resulted in larger TACs. Before 1996, most of the POP trawl catch (>90%) was taken by large factory-trawlers that processed the fish at sea. A significant change occurred in 1996, however, when smaller shore-based trawlers began taking a sizable portion of the catch in the Central Gulf area for delivery to processing plants in Kodiak. These vessels averaged about 50% of the catch in the Central Gulf area since 1998. By 2008, catcher vessels were taking 60% of the catch in the Central Gulf area and 35% in the West Yakutat area. Factory trawlers continue to take nearly all the catch in the Western Gulf area (Hulson et al, 2021).

In 2007, the Central GOA Rockfish Program was implemented to enhance resource conservation and improve economic efficiency for harvesters and processors who participate in the Central GOA rockfish fishery. This rationalization program established cooperatives among trawl vessels and processors which receive exclusive harvest privileges for rockfish management groups. The primary rockfish management groups are northern rockfish, POP, and dusky rockfish. The season runs from the beginning of April through mid-November (Hulson et al, 2021).

Total catch of POP in the Gulf of Alaska since 2016 has ranged from a low of 23,035 mt during that year to a high of 28,812 mt in 2023. Historically, bottom trawls have accounted for nearly all the commercial harvest of POP. In recent years, however, the portion of the POP catch taken by pelagic trawls has increased. The percentage of the POP Gulf-wide catch taken in pelagic trawls increased from an average of 7% during 1990-2005 to an average of 33% with the maximum amount of 40% of rockfish harvested in 2023.

Table 3-4. Number of vessels using pelagic trawl gear and annual catch by pelagic trawl gear in the Gulf of Alaska rockfish fishery from 2019 - 2023.

	2019	2020	2021	2022	2023
Number of Vessels	26	27	28	20	24
Total Catch (mt)	7,941	11,114	13,852	12,723	14,988
% of Trawl Rockfish target catch with pelagic trawl gear	24.8%	35.2%	34.2%	32.3%	40.3%

### 3.4 Regulatory Closure Zones and Gear Limitations

Numerous regulations within part 679 rely upon the pelagic and nonpelagic trawl definitions as a foundation for subsequent management measures. These regulations pertain to various topics including directed fishing allowances, area and gear closures, bycatch and prohibited species catch (PSC) limits, and recordkeeping and reporting requirements.

While the Bering Sea pollock fishery is required to use pelagic trawl gear (§ 679.24), there is no similar requirement for vessels targeting other groundfish or pollock in the Gulf of Alaska. Certain area and gear closures restrict nonpelagic trawls and limit trawling activity to vessels using pelagic trawl gear within the confines of that specific area. Trawl vessels fishing in these areas could thus be impacted by any changes to the pelagic trawl gear definition. In most areas, there is limited overlap of where the Bering Sea pollock fishery overlaps with these protection areas. The Red King Crab Closure Area is one area that has overlap and has been referenced in other analyses evaluating the efficacy of the Red King Crab Closure Area (NPFMC and NMFS 2024). This section gives a brief overview of those areas.

- Bering Sea
  - [Red King Crab Closure Area](#). Directed fishing for groundfish by vessels using trawl gear other than pelagic trawl gear is prohibited at all times.
  - [Alaska Seamount Habitat Protection Areas](#). No federally permitted vessel may fish with bottom contact gear in the Alaska Seamount Habitat Protection Areas, as described in Table 22 to part 679.
  - [Aleutian Islands Coral Habitat Protection Areas](#). No federally permitted vessel may fish with bottom contact gear in the Aleutian Islands Coral Habitat Protection Areas, as described in Table 23 to part 679.
  - [Aleutian Islands Habitat Conservation Area](#). Except within those areas identified as opened to nonpelagic trawl gear fishing in Table 24 to part 679, no federally permitted vessel may fish with nonpelagic trawl gear in the Aleutian Islands Habitat Conservation Area, as described in Table 24 to part 679.
  - [Bowers Ridge Habitat Conservation Zone](#). No federally permitted vessel may fish with mobile bottom contact gear in the Bowers Ridge Habitat Conservation Zone, as described in Table 25 to part 679.
  - [Bering Sea Habitat Conservation Area](#). No federally permitted vessel may fish with nonpelagic trawl gear in the Bering Sea Habitat Conservation Area specified at Table 42 and Figure 16 to part 679.
  - [Northern Bering Sea Research Area](#). No federally permitted vessel may fish with nonpelagic trawl gear in the Northern Bering Sea Research Area specified at Table 43 and Figure 17 to part 679.
  - [Nunivak Island, Etolin Strait, and Kuskokwim Bay Habitat Conservation Area](#). No federally permitted vessel may fish with nonpelagic trawl gear in the Nunivak Island, Etolin Strait, and Kuskokwim Bay Habitat Conservation Area specified at Table 44 and Figure 21 to part 679.
  - [St. Lawrence Island Habitat Conservation Area](#). No federally permitted vessel may fish with nonpelagic trawl gear in the St. Lawrence Island Habitat Conservation Area specified at Table 45 to part 679.
  - [St. Matthew Island Habitat Conservation Area](#). No federally permitted vessel may fish with nonpelagic trawl gear in the St. Matthew Island Habitat Conservation Area specified at Table 46 to part 679.

- Gulf of Alaska
  - [Marmot Bay Tanner Crab Protection Area](#): No federally permitted vessel may fish with trawl gear in the Marmot Bay Tanner Crab Protection Area, as described in Figure 5 to this part, except federally permitted vessels directed fishing for pollock using pelagic trawl gear.
  - [Type I closures](#): No person may trawl in waters of the EEZ within the vicinity of Kodiak Island, as shown in Figure 5 to part 679 as Type I areas, from a vessel having any trawl other than a pelagic trawl either attached or on board.
  - [Type II closures](#): From February 15 to June 15, no person may trawl in waters of the EEZ within the vicinity of Kodiak Island, as shown in Figure 5 to part 679 as Type II areas, from a vessel having any trawl other than a pelagic trawl either attached or on board.
  - [Cook Inlet](#): No person may use a nonpelagic trawl in waters of the EEZ of Cook Inlet north of a line from Cape Douglas (58°51.10' N. lat.) to Point Adam (59°15.27' N. lat.).
  - [Gulf of Alaska Coral Habitat Protection Areas](#): No federally permitted vessel may fish with bottom contact gear in the Gulf of Alaska Coral Habitat Protection Areas, as described in Table 26 to part 679.
  - [Gulf of Alaska Slope Habitat Conservation Areas](#): No federally permitted vessel may fish with nonpelagic trawl gear in the Gulf of Alaska Slope Habitat Conservation Areas, as described in Table 27 to part 679.

Several regulations involving area closures (Alaska Seamount Habitat Protection Areas, Aleutian Islands Coral Habitat Protection Areas, Bower's Ridge Habitat Conservation Zone, and Gulf of Alaska Coral Habitat Protection Areas) rely upon the mobile bottom contact gear and bottom contact gear definitions, which are in turn based upon the pelagic and nonpelagic gear definitions.

Associated gear limitations and prohibitions:

- [BSAI trawl gear performance standard](#): Except for catcher vessels in the trawl EM category, use a vessel to participate in a directed fishery for pollock using trawl gear and have on board the vessel, at any particular time, 20 or more crabs of any species that have a carapace width of more than 1.5 inches (38 mm) at the widest dimension.
- [GOA trawl gear performance standard](#): Except for catcher vessels in the trawl EM category, use a vessel to participate in a directed fishery for pollock using trawl gear when directed fishing for pollock with nonpelagic trawl gear is closed and have on board the vessel, at any particular time, 20 or more crabs of any species that have a carapace width of more than 1.5 inches (38 mm) at the widest dimension.
- [Trawl footrope](#): No person trawling in any GOA area limited to pelagic trawling under § 679.22 may allow the footrope of that trawl to be in contact with the seabed for more than 10 percent of the period of any tow.
- [BSAI pollock nonpelagic trawl prohibition](#): No person may use nonpelagic trawl gear to engage in directed fishing for pollock in the BSAI (§ 679.24 "Gear Limitations").

### 3.5 Related Regulations

The regulatory definition of a pelagic trawl net varies across jurisdictional boundaries pertaining to state and federal waters off Alaska (5 AAC 39.105 10 C (ADF&G 2023)). Vessels regularly participate in Federal and state water trawl fisheries and therefore have to comply with different sets of regulatory restrictions depending on the area of operation. This added complexity can create confusion for fishermen and could contribute to noncompliance. The pelagic trawl gear definitions are listed in Table 3-5 by region for jurisdictions with potential for crossover vessel participation (Alaska pollock fishery in Alaska Federal and state waters, Pacific whiting fishery within the West Coast federal waters).

Table 3-5. Pelagic trawl gear definition by region

Regulatory Jurisdiction	Pelagic Trawl Definition
<p>Fisheries of the Exclusive Economic Zone off Alaska (50 CFR 679.2)</p>	<p>Pelagic trawl gear means a trawl that:</p> <ul style="list-style-type: none"> <li>(i) Has no discs, bobbins, or rollers;</li> <li>(ii) Has no chafe protection gear attached to the footrope or fishing line;</li> <li>(iii) Except for the small mesh allowed under paragraph (14)(ix) of this definition:               <ul style="list-style-type: none"> <li>(A) Has no mesh tied to the fishing line, headrope, and breast lines with less than 20 inches (50.8 cm) between knots and has no stretched mesh size of less than 60 inches (152.4 cm) aft from all points on the fishing line, headrope, and breast lines and extending passed the fishing circle for a distance equal to or greater than one half the vessel's LOA; or</li> <li>(B) Has no parallel lines spaced closer than 64 inches (162.6 cm) from all points on the fishing line, headrope, and breast lines and extending aft to a section of mesh, with no stretched mesh size of less than 60 inches (152.4 cm) extending aft for a distance equal to or greater than one-half the vessel's LOA;</li> </ul> </li> <li>(iv) Has no stretched mesh size less than 15 inches (38.1 cm) aft of the mesh described in paragraph (14)(iii) of this definition for a distance equal to or greater than one-half the vessel's LOA;</li> <li>(v) Contains no configuration intended to reduce the stretched mesh sizes described in paragraphs (14)(iii) and (iv) of this definition;</li> <li>(vi) Has no flotation other than floats capable of providing up to 200 lb (90.7 kg) of buoyancy to accommodate the use of a net-sounder device;</li> <li>(vii) Has no more than one fishing line and one footrope for a total of no more than two weighted lines on the bottom of the trawl between the wing tip and the fishing circle;</li> <li>(viii) Has no metallic component except for connectors (e.g., hammerlocks or swivels) or a net-sounder device aft of the fishing circle and forward of any mesh greater than 5.5 inches (14.0 cm) stretched measure;</li> <li>(ix) May have small mesh within 32 ft (9.8 m) of the center of the headrope as needed for attaching instrumentation (e.g., net-sounder device); and</li> <li>(x) May have weights on the wing tips.</li> </ul>
<p>Alaska State Waters (5 AAC 39.105(10)(C))</p>	<p>A pelagic trawl is a trawl where the net, or the trawl doors or other trawl-spreading device, do not operate in contact with the seabed, and which does not have attached to it any protective device, such as chafing gear, rollers, or bobbins, that would make it suitable for fishing in contact with the seabed;</p>
<p>Fisheries off West Coast States (50 CFR 660.11)</p>	<p>Midwater (pelagic or off-bottom) trawl means a trawl in which the otter boards and footrope of the net remain above the seabed. It includes pair trawls if fished in midwater. A midwater trawl has no rollers or bobbins on any part of the net or its component wires, ropes, and chains. For additional midwater trawl gear requirements and restrictions, see § 660.130(b), subpart D.</p> <p>Subpart D (2) Midwater trawl gear must have unprotected footropes at the trawl mouth, and must not have rollers, bobbins, tires, wheels, rubber discs, or any similar device anywhere on any part of the net. The footrope of midwater gear may not be enlarged by encircling it with chains or by any other means. Ropes or lines running parallel to the footrope of midwater trawl gear must be bare and may not be suspended with chains or any other materials. Sweep lines, including the bottom leg of the bridle, must be bare. For at least 20 ft (6.15 m) immediately behind the footrope or headrope, bare ropes or mesh of 16-inch (40.6-cm) minimum mesh size must completely encircle the net.</p>

## 4 Analysis of Impacts

This section includes a preliminary analysis of two alternatives: (1) no action and (2) revising regulations within paragraph 14 of the definition of authorized fishing gear in § 679.2 for pelagic trawl gear. Alternative 2 includes four options: (1) exclude the codend from limitations applicable to the trawl net, (2) remove outdated text related to parallel line trawls, (3) allow the use of flotation within bycatch excluder devices, and (4) allow hardware that secures technology to the trawl as long as the hardware does not appreciably change the intended performance of the trawl. These options are not exclusive and can be chosen separately or in any combination. Analysts are seeking input from the Council and the public that will assist in understanding the intended implementation and impact of the alternatives and options. This section includes a preliminary analysis assessment of the expected outcomes of the specific changes considered in the options. However, this document does not contain an evaluation of the costs and benefits or an evaluation of the potential environmental impacts. A NEPA analysis would be prepared in the next iteration of this analysis based upon any revisions to the alternatives and options resulting from this analysis.

Overall, this action would not change existing management measures established in the BSAI or GOA FMPs. These management measures are summarized in Table ES-1 in each FMP and would remain unchanged by this action. Notably, this action does not change the process for establishing total allowable catch limits or prohibited species catch limits for any species. This action includes options for specific regulatory changes to the definition of pelagic trawl gear to improve regulatory compliance by better aligning the regulations with common operational practices and is intended to be consistent with existing management measures. The impacts of this action on the implementation of existing management measures would be discussed in the next iteration of this analysis and has not been prepared at this time.

To aid the Council in understanding how each option would be implemented, analysts have included draft regulatory language intended to aid the public and Council discussion. **As is standard practice with all Council recommended actions, NMFS would draft and prepare proposed regulations based on the final Council recommendation and the exact wording of proposed regulations deemed necessary to implement these measures could be different than the language included in this document.** Any draft regulatory language in this document would be subject to technical edits for clarity and consistency with the Council's preferred alternative.

Due to limited information available about the specific form and function of each component of pelagic trawl gear, **Analysts request input from fishery participants regarding the types of costs and benefits of each particular change contemplated in this action. Information on the types of impacts to fishing operations and how each alternative and option could impact fishing operations would assist analysts in evaluating the potential impacts of this action.** The scope of additional analysis would depend on any clarifications the Council may provide to the options and alternatives.

### 4.1 Alternative 1: No action (Status quo)

Alternative 1 (status quo) may negatively impact vessel owners and operators in the BS Pollock fishery who are required to use pelagic trawl gear. Many gear configurations commonly used in the BS Pollock fishery do not comply with the definition of pelagic trawl gear when read in combination with the definition of codend at § 600.10. Additionally, use of certain designs for salmon bycatch excluder devices do not comply with the definition of pelagic trawl gear. As the definition is currently written, flotation is only allowed for a net-sounder device and not for any other portion of the net including in the codend and bycatch excluder devices. Use of flotation within both is common practice, with certain bycatch excluder devices having gone through the EFP process necessitating the use of flotation to function properly.

Without updates to the current regulatory text, many vessels participating in the BS pollock fishery could be subject to enforcement actions and monetary penalties.

Flotation would continue to be restricted from use in bycatch excluder device design for pelagic trawl gear, as well as metallic components (and subsequently, the attached technologies such as live feed cameras or lights). Removal or retrofitting of bycatch reduction devices to remove flotation could potentially reduce the effectiveness of such devices and potentially result in higher bycatch rates of salmon in the BS pollock fishery or reduced fishing efficiency if use of salmon excluders without flotation reduces the catch per unit effort. Both of these conditions could result in negative economic impacts due to potential increases in PSC or resulting fleet movement to less productive fishing areas with less bycatch. Use of bycatch excluder devices within pelagic trawl gear is beneficial to reduce bycatch such as salmon and ensure compliance with incentive plan agreements (IPAs) within the AFA trawl fleet aimed at reducing Chinook and chum salmon bycatch. A *Salmon bycatch incentive plan agreement (IPA)* is a voluntary private contract, approved by NMFS under [§ 679.21\(f\)\(12\)](#), that establishes incentives for participants to avoid Chinook salmon and chum salmon bycatch while directed fishing for pollock in the BS. The IPA must include a description of 13 different regulatory requirements for NMFS to approve the plan, including a requirement for the use of salmon excluder devices, with recognition of contingencies, from January 20 to March 31, and from September 1 until the end of the B season.

It is common practice for codends attached to pelagic trawl nets to include metallic components such as chain riblines. Without updates to the current regulatory text to exclude the codend, many vessels participating in the BS pollock fishery could be subject to enforcement actions and monetary penalties due to their use of chains and flotation in codends used to fish for pollock. Removal of flotation and metallic components (including connectors) from the codend could reduce operational functionality of the codend.

Language restricting the use of parallel line trawls would remain in the pelagic trawl definition and hardware used to attach technology to the net made of metallic components would continue to be limited by the current definitions. The only exception would continue to be the use of connectors in a specific portion of the net as described in the current definition. A net-sounder would continue to be the only technology expressly allowed to be attached to a pelagic trawl net. One of the restrictions specified in the pelagic trawl gear definition has to do with metallic components. Paragraph (14)(viii) of the pelagic trawl gear definition states that a pelagic trawl, “Has no metallic component except for connectors (e.g., hammerlocks or swivels) or a net-sounder device aft of the fishing circle and forward of any mesh greater than 5.5 inches (14.0 cm) stretched measure.”

In the February 2024 discussion paper, NMFS suggested that the Council consider whether paragraph (14)(viii) should be clarified. NMFS noted that this paragraph could be interpreted multiple ways and presented one interpretation as an example. Namely, in the February 2024 discussion paper, NMFS said the current language could be interpreted to allow metallic connectors anywhere on pelagic trawl gear and to allow a net-sounder device aft of the fishing circle and forward of any mesh 5.5 inches or greater. However, perhaps the leading interpretation of paragraph (14)(viii) is to disallow metallic components on pelagic trawl gear, except metal component(s) that are: (1) connectors or a net-sounder device; and (2) located aft of the fishing circle and forward of 5.5 inch stretched mesh.

NMFS’ original rationale for limiting the use of metallic components on pelagic trawl gear in paragraph (14)(viii) was to prevent reconfigured nonpelagic trawls from complying with the definition of pelagic trawl gear, while remaining capable of being fished as a nonpelagic trawl. NMFS explained that, in early 1992, to meet the prior definition of pelagic trawl gear, fishermen attached parallel lines to nonpelagic trawl fishing lines. This caused the nonpelagic trawl’s fishing lines, which are metal components made of heavy chain or wire rope, to be further back in the belly of a trawl and allowed the trawl to fish as a nonpelagic trawl. This prompted the Council's decision to revise the pelagic trawl definition (58 FR



17196, April 1, 1993). There is no mention in that proposed or final rule that this restriction pertained to codends, although paragraph (14)(x) specifically allows for weights on the wingtips of pelagic trawl gear. In February 2024, the Council did not include an option in its suite of alternatives to clarify the location on a trawl net where metallic components are restricted and where they are allowed.

Available trawl technology has evolved since 1993. A net-sounder device, often mounted at or near the headline of the trawl net, is defined in § 679.2 as a “sensor used to determine the depth from the water surface at which a fishing net is operating.” Modern net-sounder devices use multiple element transducers and function more as sonar, providing “slices” of the area in front of the net as well as distance from the water surface or seabed by transmitting vertically and horizontally.<sup>11</sup> There is an array of available sensing technology on the market, including but not limited to depth and temperature sensors, catch sensors, net-sounders, doorspread sensors, trawl warp measurement sensors, and bottom contact sensors. Catch sensors are commonly mounted at various positions along and just forward of the codend that allow vessel operators to monitor codend fullness to know when to haul the net, with companies recommending several sensors be placed along the trawl to best determine rate of catch and fullness<sup>12</sup> (FAO 2024). Live feed cameras and lights can even allow vessel operators to view their catch in real time and move locations if prohibited species catch is high.

Without clarification, the regulations would remain unchanged and open to different interpretations about what type of metallic components pelagic trawl gear may have and also where on pelagic trawl gear permissible metallic components may be located.

## 4.2 Alternative 2: Revise definition of pelagic trawl gear

Vessel owners and operators using pelagic trawl gear could be affected by the action alternative and options, although any changes considered in this action would result in less restrictions applicable to pelagic trawl gear than the current definition and thus the impacts are expected to be beneficial to fishery participants required to use pelagic trawls. Alternative 2 could benefit impacted entities by easing gear restrictions and explicitly allowing the use of flotation in bycatch excluder devices, this could allow these devices to continue to function as designed and tested. Similarly, by excluding the codend from the restrictions applicable to a pelagic trawl net, fishery participants may benefit from the allowing codend designs to include metallic components, flotation, and the use of any and all technology. BS pollock fishery participants would have full flexibility to innovate codend design to maximize functionality and safety. The ability to attach any and all technology to the codend, including sensors that gather data or measure performance of the net, could improve fishing efficiency.

Although direct economic benefits cannot be quantified, Alternative 2 and associated options are expected to have a net positive impact on fishery participants by aligning the regulations with current gear configurations. Alternative 2 and all associated options would not require any gear modifications and would largely modify regulations to be in line with current fishing operations. Furthermore, Alternative 2 would not change current fishing practices or have any effect on the manner or duration in which pelagic gear contacts the bottom.

Alternative 2 is expected to allow current components within pelagic trawl gear to continue being used. Option 1 would allow the codend to be unrestricted by limitations pertaining to pelagic trawl gear specifications, but would not require vessels to make any gear changes to be in compliance. Option 2 would remove outdated text within paragraph (14)(iii)(B)) of the definition of authorized fishing gear

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<sup>11</sup> <https://www.psicompany.com/net-sounders/>; <https://www.wesmar.com/commercial-fishing-trawl-sonar>

<sup>12</sup> <https://www.radioholland.com/product/marport-catch-sensors/>; [https://www.marport.com/doc\\_web/catch/topics/t-Installingsensor.html](https://www.marport.com/doc_web/catch/topics/t-Installingsensor.html)

related to parallel line trawls. Parallel line trawls are obsolete and associated text could be removed to streamline the regulation. Although reduced limitations provided by Option 1 would allow for the addition of flotation within codends, Option 3 would allow for flotation within bycatch excluder devices. Bycatch excluder devices currently in use such as salmon excluders often use flotation to keep excluder openings and escape paths open while fishing, although this is currently limited by the pelagic trawl gear definition. Option 4 is expected to allow for electronic technology such as live-feed cameras and flow sensors to be attached to trawl nets as long as it does not alter the intended performance of the trawl. Alternative 2 in no way affects Total Allowable Catch, MRA management, harvest, delivery to communities, vessel safety or a myriad of other potential effects.

#### **4.2.1 Option 1: Exclude the codend.**

An approach to drafting regulation changes to implement Option 1 could be to revise paragraph (14) of the definition of “authorized fishing gear” to exclude the codend from the restrictions applicable to pelagic trawl gear. This could be accomplished with the addition of a new paragraph stating, “*the codend is excluded from restrictions applicable to pelagic trawl gear.*”

Option 1 would align the regulations with current fishing practices and would clearly exclude the codend from limitations set forth in the trawl gear definition without altering how the net is fished. This addition is in line with how pelagic trawl gear has been designed and fished in the North Pacific since 1993 and would have minimal impacts to the fleet and no impact on management goals. During the creation of the current pelagic trawl gear definition, floats were limited in the net to only being allowed for a net-sounder device to ensure floats weren’t attached to the headrope to keep the trawl mouth when trawling in shallow waters (58 FR 17196, April 1, 1993). As the stated rationale was in relation to the forward sections of the pelagic trawl gear, limiting flotation in the codend was not the stated intent when the definition was proposed and implemented. Furthermore, Option 1 would provide opportunity for vessel operators to choose the codend components and design that is safest for their crew and vessel. Safety of life at sea is of particular concern at the time the codend is being brought onboard the vessel.

This option could allow vessels to continue to use codend designs with flotation and metallic components while other restrictions would continue to remain in place for the remainder of the trawl net. Option 1 could lead to modifications in some instances that change where the codend sits in the water column. This would not change how the trawl net functions to catch fish and funnel fish into the codend, but may change hydrodynamic performance or reduce drag. Flotation in the codend is commonly used to make the codend neutrally buoyant and prevent the codend from dragging on the bottom. Floats counteract the weight of structural components added to the codend for safety such as metal riblines. Full or overfilled codends, bad weather conditions and foreign objects that might accidentally be caught can result in net failure. As such, codends are often designed with reinforcements or chafing gear to prevent loss of catch and safety of crew. Metal components like chain riblines in the codend can improve safety for vessel crew from net failure when codends are under straining conditions while being hauled on deck. Fishery participants have stated that flotation in the codend additionally helps maintain the tapered net shape and water flow while fishing, and helps bring the net to the surface and onboard the vessel. It can also maintain neutral buoyancy if fish swim bladders burst and could also prevent the net from twisting during deployment or haulback. While limited to one vessel, recent research by the ASFC testing salmon excluders on a chartered commercial fishing vessel found that the codend, which had large floats inside, typically stayed between the headrope and footrope during all tows (NPFMC and NMFS 2023). If the codend were to drag along the bottom, it would potentially destroy a very expensive piece of equipment and jeopardize the entire catch if holes occurred. Even when a vessel operator intends to fish a pelagic trawl net very close to the seafloor, the codend is not the portion of the net that would be expected to be in contact with the seafloor. The limitations that currently apply to the codend do not contribute to management goals to minimize bycatch or reduce impacts to sensitive benthic habitats. Any changes to

codend design would in theory be made to improve some aspects of fishing efficiency such as durability of the codend or hydrodynamic properties.

Retention of fish is important for total accountability and precise estimate of total harvest and accounting of salmon PSC estimates. Regulations require full retention of all salmon harvested in pollock directed fisheries and maximized retention of all catch on vessels opting into the electronic monitoring option. Collecting the data needed for management relies on retention of all harvest so it can be sorted, weighed and sampled. Components that protect and strengthen the codend contribute to protecting the codend from unintentional tears and helps prevent loss of catch and improve the data collection onboard the vessels that NMFS uses for management purposes. Catch that spills from the net through torn net panels can contribute to unobserved mortality and decrease precision of catch estimates and total mortality.

This option would not conflict with existing limitations contained in the pelagic trawl gear definition or the nonpelagic trawl gear definition applying to the trawl net. As such, Option 1 would not be a substantive change to fishing operations.

#### **4.2.2 Option 2: Remove outdated text.**

Under Amendment 2, Option 2, outdated regulatory text would be removed related to parallel line trawls. 50 CFR 679.2 “authorized fishing gear”(14)(iii)(B) states, “*Has no parallel lines spaced closer than 64 inches (162.6 cm) from all points on the fishing line, headrope, and breast lines and extending aft to a section of mesh, with no stretched mesh size of less than 60 inches (152.4 cm) extending aft for a distance equal to or greater than one-half the vessel's LOA.*” Under Option 2, this paragraph would be removed.

This option is not expected to affect current trawl operations because parallel line trawls are antiquated and no longer used in North Pacific fisheries. Removing the language in this text from regulations could reduce any confusion in interpreting regulations about parallel line trawls in relation to pelagic trawl gear and could improve clarity of the regulations for enforcement by removing obsolete text. The BS pollock fishery is a rationalized fishery and fishery participants no longer race to catch as much fish as possible in as short an amount of time. Therefore, the motivations that existed in the early 1990’s to retrofit nonpelagic trawl gear to game the system no longer exist under the rationalized fishery where cooperatives function to harvest the pollock TAC in an economically efficient manner. This regulation is no longer limiting for the modern fleet and, if removed, could reduce unnecessary regulatory text.

When the pelagic trawl gear definition was proposed in 1993, fishing industry representatives emphasized that pelagic trawls were constructed to reduce drag during fishing operations by using large mesh openings or parallel lines behind the trawl opening. Mesh openings of at least one meter (3.3 feet) or parallel lines that are at least one meter apart accomplished the objective of reducing drag and also resulted in reduced bycatch of halibut and crab (58 FR 17196, April 1, 1993). The rationale for the adoption of parallel line trawls alongside large mesh pelagic trawls at the time is not detailed, and analysts can only speculate reasons for the gear variation becoming obsolete. Parallel lines may have tangled and twisted more readily than standard mesh pelagic trawls. However, could this variation resurface in the future? If Option 2 were adopted, parallel line trawls would no longer be prohibited for use in pelagic trawl fisheries. Instead of being limited to 64 inch spacings between parallel lines on the fishing line, headrope, or breast lines, pelagic trawl gear would be limited to text within § 679.2 “authorized fishing gear”(14)(iii)(A) stating, “Has no mesh tied to the fishing line, headrope, and breast lines with less than 20 inches (50.8 cm) between knots and has no stretched mesh size of less than 60 inches (152.4 cm) aft from all points on the fishing line, headrope, and breast lines and extending passed the fishing circle for a distance equal to or greater than one half the vessel's LOA”. Thus, parallel line spacings would be restricted from 64 inch spacings to 20 inch spacings on the fishing line, headrope, or breast lines.

Option 2 would not be expected to result in changes to fishing gear configuration nor have any quantifiable economic impacts, as rope trawls are an obsolete gear design and not currently in use and not likely to make a comeback. Should the gear variation reemerge, it would continue to be limited by the remaining provisions included in the definition of pelagic trawl gear.

#### 4.2.3. Option 3: Allow flotation within bycatch excluders.

An approach to drafting regulation changes to implement Option 3 could be to add an exception in paragraph (14)(vi) to allow flotation to be attached to bycatch excluder devices.

*(vi) Has no flotation except:*

- (A) floats capable of providing up to 200 lb (90.7 kg) of buoyancy to accommodate the use of a net-sounder device; or*
- (B) floats attached to a bycatch excluder device.*

As discussed in section 2.2.3, bycatch excluder devices also commonly include other components currently restricted in pelagic trawl gear including hardware or technology containing metallic components and these components would continue to be limited by the existing definition of pelagic trawl gear.

The scope of the regulatory change that the Council has identified regarding bycatch excluder devices is limited to only addressing use of flotation. There are numerous other components commonly used in excluder devices that would continue to be limited by the existing definition of pelagic trawl gear including live feed cameras and lights containing metallic components (C. Rose, personal communication, FishNext Research, Founder and Principal Scientist, November 8, 2024).

Option 3 may provide positive economic benefits to vessels operating in the BS pollock fishery by allowing continued use of bycatch excluder devices with flotation components. The outcome of Option 3 could be a net benefit for reducing bycatch in pelagic trawl gear. This revision would clearly allow for flotation to be used in bycatch reduction devices, allowing the pelagic trawl gear definition to better reflect current fishing practices in support of NMFS and the Council's and NMFS intent to reduce salmon PSC in the pollock fisheries.

**NMFS recommends the Council consider other commonly used components in bycatch excluder devices and if they are compliant with the definition of pelagic trawl gear and options considered in this action.** If there are commonly used components of bycatch excluder devices that would be limited or prohibited from use in pelagic trawl gear, those components would continue to be non-compliant and the Council could consider adding those components to the options considered in this analysis, or excluding bycatch excluder devices from the limitations in the pelagic trawl gear definition. The latter approach would be consistent with the approach to exempting the codend used in Option 1.

#### 4.2.4 Option 4: Allow hardware securing technology.

Option 4 specifies allowing "hardware that secures technology to the trawl as long as the hardware does not appreciably change the intended performance of the trawl". As described in section 2.2.4 , **in order to move this option forward, analysts are seeking input that will assist in the implementation of this option. Specific input is requested on the following specific questions:**

- **How could NMFS define "technology"? What are the limits, and what types of technology adoption is the Council hoping to encourage? Without a more specific definition, a participant could argue almost anything qualifies as "technology."**
- **The terms "appreciably change" and "intended performance" are unlikely to permit development of objective standards for regulation and enforcement. What is the policy**

**objective the Council is trying to accomplish with this language, and is there a more specific way to frame Option 4 to achieve that goal?**

- **What are reasonable guardrails for regulatory changes that should occur in this action to allow for the use of innovative technology versus the types of changes that the Council envisions under the separate Council actions to incentivize trawl gear innovation and refine to the performance standard?**

Option 4 also states that technology that may need to be secured to the trawl includes live-feed cameras, flow sensors, etc. The current definition of pelagic trawl gear allows for one net-sounder device. As such, while more hardware would be allowed in the net through this option, the hardware could still only attach one net-sounder device to the net. Use of technology (other than a net-sounder device) that includes metallic components would continue to be limited by the existing definition of pelagic trawl gear. This option does not expressly define the specific technologies that are intended to be allowed for use in a pelagic trawl net. The Council's motion references the use of live feed cameras, flow sensors, etc. as the types of technology that are expected to be connected, however this option does not expressly allow the use of such technology.

As explained in Section 5.3, Enforcement has raised concerns with the standard that hardware allowed under Option 4 is not intended to "appreciably change the performance of the trawl." Enforcement of this standard would be extremely difficult given the inherent challenges enforcement would face in trying to determine and establish whether particular hardware appreciably changed the intended performance of a particular vessel's pelagic trawl gear.

One potential approach for clarifying Option 4 could be to consider if the Council intends the scope of this option is to allow the use of current technologies or if the Council's intent is to allow the use of all possible technologies that could or would be developed in the future. If the Council intends to focus this option on allowing existing hardware and technology (as stated in the purpose and need), a first step would be to request information from the fishery participants on the specific types of hardware and technology that is currently being used in addition to a net-sounder and to consider how the use of these impact the performance of the trawl. Based on the other ongoing Council actions described in Section 1.3, Analysts assume that the Council does not intend this option to modify how contact with the seafloor is regulated and that the existing performance standard specified 679.7(a)(14) would continue to restrict pelagic trawl gear from being fished in contact with the seafloor until revisions occur following a separate Council action.

According to the current definition of the pelagic trawl gear, the only technology that is explicitly allowed is a net-sounder. Option 4 could be revised to allow for the use of technology in addition to a net-sounder for a specific purpose. Data collection is a common theme representing the technologies mentioned in current definition and in the Council's motion. As discussed in section 4.1, net-sounder devices gather and convey data about the position and shape of the net as well as the fish entering the net. Live feed cameras are a monitoring tool that allows the vessel operator to visually see what is passing by the camera lens while flow sensors gather information about the flow of water through the net. Catch sensors are commonly mounted at various positions along and just forward of the codend allowing vessel operators to monitor codend fullness to know when to haul the net increasing efficiency, reducing safety risks to crew and reducing loss of catch. Collectively, these technologies are all useful data collection tools.

For example, explicitly allowing use of sensor technology could aid in the continued refinement of these sensors for compliance monitoring purposes, and may support adoption of this technology to monitor regulatory compliance at some point in the future. There could be various indirect economic benefits depending on the scope of acceptable technologies attached to the net using this hardware; whether for scientific research purposes to better sense and understand bottom contact and impacts, improve net efficiency purposes through better awareness of how and where the net is fishing in the water column, or

even future bycatch reduction technologies. Allowing the use of technology that monitors or gathers data regarding the movement and performance of a pelagic trawl gear is necessary for the effective operations of pelagic trawl gear and continued improvements under changing conditions.

**NMFS recommends that the Council clarify what types of technology would be allowed in the net other than net-sounder devices or sensors that gather data.** Implementing regulations need to be written in a way that is clear and easily allows the identification of compliant components to be distinguished from non-compliant components and several questions must be answered in doing so.

For use of technology to improve monitoring capabilities, Option 4 could be revised to allow for additional technology (beyond a net-sounder device) to be attached to the net. This information could be used for a variety of purposes including to inform the vessel captain as they make real-time decisions, to better understand how the gear functions, or to better understand gear impacts to the environment. By revising the definition of pelagic trawl gear to allow the use of such technology, this could allow for these data to be collected or new technologies developed without the need for an exempted fishing permit (EFP). Analysts assume that the Council supports the use of technology that could improve the operational or scientific understanding of pelagic trawl gear performance and the impacts of pelagic trawl gear on the seafloor. This would be consistent with the Council’s stated intent in supporting other ongoing scientific research and gear innovation as described in section 1.3.1.

**Because elements of Option 4 are closely related to the existing limitations on metallic components, NMFS recommends the Council consider revisions to paragraph (14)(viii) of the definition of pelagic trawl gear to clarify specifically where metallic components (such as connectors and a net-sounder) are meant to be limited in pelagic trawl gear.** One option to clarify where metallic components are allowed could be to modify paragraph (14)(viii) of the definition of “authorized fishing gear” in § 679.2 as follows:

*“has no metallic components in the portion of the trawl net that is aft of the fishing circle and forward of any mesh greater than 5.5 inches (14.0 cm) stretched measure, except:*

*connectors (e.g., hammerlocks or swivels); and*

*[list of technology that is allowed (e.g. net-sounder devices, sensors that gather data or measure performance of the net and associated hardware to secure such instrumentation to the net)]*

Shaded text could be revised based on clarifications on Option 4.

#### 4.2.5 Regulatory approaches for technology

All of the approaches listed under Alternative 2 would revise the definition of pelagic trawl gear that is specified in regulation. Defining gear in regulations is a "traditional regulation" method, in the sense that the regulations very specifically describe what has to be done, how, and by whom. The benefit of these types of prescriptive regulations is that when they are well written they can be very clear, making it easier for both compliance and enforcement. The downside is that prescriptive regulations can become outdated and limit innovation. This is especially true for regulations regarding technology. Any time technology changes, there is the potential that the regulations also have to be updated, which is time consuming and slow.

Overall, there are regulatory approaches that we’ve used to implement technology, such as Electronic Monitoring (EM) and Electronic Reporting (ER) in Alaska: 1) Prescriptive requirements; 2) Type approval requirements; and 3) Performance standards. As outlined above, prescriptive requirements list specifically in regulation who does what, when, and how. An example from Alaska is the recordkeeping and reporting regulations for elandings in 679.5(e) that specifically lists what has to be reported, how, and by whom.

Type-approval regulations lay out a process to grant approval to a product that meets a minimum set of regulatory, technical, and/or safety requirements. The regulations governing the use of flow scales on catcher/processors and motherships are an example of type-approval regulations (50 CFR 679.28). This type approval method works well for scales and VMS, because these are part of a well-established technology with larger international trade organizations determining what types of scales to approve for use in trade. The downside to a type-approval process is that the specifics of the technology described in regulations can change and the regulations can become outdated.

Performance standards are another way to regulate technology and the Catch Monitoring and Control Plan (CMCP) regulations (679.28(g)(7)) are an example of performance standards. The CMCP regulations describe how a shoreside processor must meet a set of specific standards to ensure proper accounting for catch occurs and the shoreside processor submits a plan to NMFS for approval that describes how they will meet those standards. When developing these regulations NMFS recognized that although these plants all might process the same species, they all had very different methods for accomplishing that goal. So rather than develop prescriptive regulations that would not work for all the processors, the agency focused on what the goal we wanted to accomplish and allowed the processors, with significant input from NMFS staff, to describe how they would meet those goals. A big benefit to performance standards is they can allow for innovation and plant-specific or vessel-specific variation, while still achieving the management goal. However, performance standards require considerable thought ahead of time to ensure that the standards make sense and will actually achieve the management goals. In other words, they are only effective if they are well written. Another downside to performance standard based regulations is they require implementation work for both the agency and the regulated entities. The communication and cooperation between the NMFS staff approving the system and the industry, especially in the first years of a program, can be time consuming.

It can also be very effective to use a combination of regulatory approaches. The regulations for compliance video on catcher/processors and motherships (679.28(h), 679.28(j) and 679.28(k)) use a combination of prescriptive requirements along with performance standards. The reason for this is that at times it really is simpler to say “16- bit or better color monitor” for viewing cameras rather than to try to develop a performance standard based on what a monitor does. But, in other cases, when there could be multiple ways to achieve the same goal, NMFS has used a performance standard that provides vessel-specific flexibility to meet the agency's needs and is cost effective for the vessel.

### **4.3 Affected Small Entities (Regulatory Flexibility Act Considerations)**

Section 603 of the Regulatory Flexibility Act (RFA) requires that an initial regulatory flexibility analysis (IRFA) be prepared to identify whether a proposed action will result in a disproportionate and/or significant adverse economic impact on the directly regulated small entities, and to consider any alternatives that would lessen this adverse economic impact to those small entities. NMFS prepares the 0IRFA in the classification section of the proposed rule for an action. Therefore, the preparation of a separate IRFA is not necessary for the Council to recommend a preferred alternative. This section provides information about the directly regulated small entities that NMFS will use to prepare the IRFA for this action if the Council recommends regulatory amendments.

This section also identifies the general nature of the potential economic impacts on directly regulated small entities, specifically addressing whether the impacts may be adverse or beneficial. The exact nature of the costs and benefits of each alternative is addressed in the impact analysis sections of the RIR and is not repeated in this section, unless the costs and benefits described elsewhere in the RIR differ between small and large entities.

## **Identification of Directly Regulated Entities**

For RFA purposes only, NMFS has established a small business size standard for businesses, including their affiliates, whose primary industry is commercial fishing (see 50 CFR 200.2). A business primarily engaged in commercial fishing (NAICS code 11411) is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates) and has combined annual receipts not in excess of \$11 million for all its affiliated operations worldwide. A shoreside and mothership processor primarily involved in seafood processing (NAICS code 311710) is classified as a small business if it is independently owned and operated, is not dominant in its field of operation (including its affiliates), and has combined annual employment, counting all individuals employed on a full-time, part-time, or other basis, not in excess of 750 employees for all its affiliated operations worldwide.

## **Count of Small, Directly Regulated Entities**

This action will directly regulate participants in the BSAI and GOA Trawl fisheries. This includes entities operating vessels with groundfish Federal fisheries permits (FFPs) catching FMP groundfish using pelagic trawl gear in Federal waters (including those receiving direction allocations of groundfish). In 2022 (the most recent year of complete data), there were 135 individual CVs and CPs with gross revenues less than or equal to \$11 million as well as 6 CDQ groups. This represents the potential suite of directly regulated small entities. In the BSAI, this includes an estimated 130 small CV and 2 small CP entities in the groundfish sector. The determination of entity size is based on vessel revenues and affiliated group revenues. This determination also includes an assessment of fisheries cooperative affiliations, although actual vessel ownership affiliations have not been completely established. However, the estimate of these 130 CVs may be an overstatement of the number of small entities. This latter group of vessels had average gross revenues that varied by gear type. Average gross revenues for trawl gear CVs are estimated to be \$2.7 million annually. Average gross revenues for CP entities are confidential. There are three AFA cooperative affiliated motherships, which appear to fall under the 750-worker threshold and are therefore small entities. The average gross revenues for the AFA motherships are confidential.

In 2022 (the most recent year of complete data), there were 677 individual CVs and CPs with gross revenues less than or equal to \$11 million operating in the GOA. This represents the potential suite of directly regulated small entities. This includes an estimated 674 small CV and 3 small CP entities in the GOA groundfish sector. The determination of entity size is based on vessel revenues and affiliated group revenues. This determination also includes an assessment of fisheries cooperative affiliations, although actual vessel ownership affiliations have not been completely established. However, the estimate of these 677 CVs and CPs may be an overstatement of the number of small entities. The CVs had average gross revenues that varied by gear type. Average gross revenues for trawl gear CVs are estimated to be \$1.38 million, respectively. Trawl gear CP entity revenue data are confidential.

## **Impacts to Small, Directly Regulated Entities**

The purpose of this action, depending on which alternative and options are ultimately chosen, is to clarify regulatory text, ease compliance risk for industry, and support bycatch reduction. The alternatives and associated options would generally “allow” industry to adapt rather than requiring new regulatory compliance. As such, this action is not expected to create significant negative effects on a substantial number of directly regulated small entities.



## 4.4 Alternatives with Respect to Net Benefit to the Nation

This section will be completed for the final action draft if the Council moves forward with consideration of the action alternatives, and a full analysis will be part of any proposed rule package.

# 5 Management Considerations

## 5.1 Monitoring

Monitoring of vessels using pelagic trawl gear is generally conducted using tools including the North Pacific Observer Program, vessel monitoring systems (VMS) and logbooks. These monitoring programs would not be impacted by any of the alternatives or associated options. Additionally, no changes would be required in these programs as a result of these regulations. Alternative 2, Option 4 could allow for collection of additional data leading to improved monitoring of pelagic trawl gear contact with the seafloor, potentially informing development of an updated pelagic trawl gear performance standard; however, this would require additional analysis.

## 5.2 Management

Regulatory revisions under Alternative 2 would have negligible, if any, impacts on management of groundfish in the BSAI and GOA. Any revisions of the regulations from options stemming from Alternative 2 is intended to reflect current fishing practices, remove outdated text, reduce bycatch and allow for hardware to be attached to the net. As such, it is not likely to change current fishing operations using pelagic trawl gear or the spatial location of catch. These changes would allow the regulations to better reflect current pelagic trawl gear configurations, would not conflict with any current management goals and would be in support of National Standards 5, 9, and 10..

## 5.3 Enforcement

As stated in Section 6.2 of the BSAI and GOA FMPs, current fishery management recognizes that a meaningful enforcement program must accompany management measures for them to be effective. As management becomes more complex, the difficulty of adequately enforcing the regulations grows. As the size and complexity of the regulatory environment increases, the burden on enforcement personnel to fully understand the nuances and implications of regulations increases as well.

NPFMC Enforcement Committee Precepts advocate for gear restrictions that can be enforced by at-sea boardings, dockside inspections, observer reports, aerial patrols and Electronic Monitoring (EM) technologies that are actionable in real time to maintain a fair fishery and stop unlawful conduct as it occurs. At-sea inspections are the optimal means of detecting the use of nonpelagic trawl in waters closed to the gear type in real time. For vessels not required to maintain a logbook or an EM system, at-sea inspections are the most viable means of detecting violations when an observer is not aboard. EM provides a secondary means to document violations but, due to the current limits of the technology and the number of trawl vessels participating in the program, should serve as a backup to a robust at-sea inspection regime.

As current regulations stand, one straightforward approach to achieve minimal disruptions during at sea-boardings is to first observe the codend of a trawl net for characteristics of nonpelagic trawl gear, such as metal components or flotation. Alternative 2, Option 1 would likely discontinue this practice, as the codend would no longer be limited by the pelagic trawl gear definition. Enforcement would no longer be able to use observations of the codend as a means to differentiate pelagic and nonpelagic trawl gear, as this would clearly allow for flotation and metallic components to be used in pelagic trawl gear codends

similar to nonpelagic trawl gear. However, forward mesh components of both nonpelagic and pelagic trawl gear would remain unchanged and still vary greatly with pelagic trawl gear containing much larger forward mesh components than nonpelagic gear, as well as differentiating headrope and footrope configurations. Nonpelagic gear contains discs, bobbins, or rollers as well as chafe protection gear in footrope gear as well as flotation in the headrope; in contrast pelagic trawl gear does not. As regulatory definitions and features of pelagic trawl gear and nonpelagic trawl gear would still differ and be observable upon inspection, they would remain enforceable. Inspecting forward portions of the net at-sea during haulback would impose greater disruption to vessel operations.

Without a regulatory definition describing the allowable configuration (ie. size, location, components) of bycatch reduction devices/salmon excluders, enforcement would be limited because all possible designs would be allowed. However, bycatch limits would continue to incentivize the use of excluder devices that are designed to reduce bycatch by the maximum amount rather than establishing specific design standards for bycatch excluder devices in regulation.

NMFS Office of Law Enforcement notes that Alternative 2 Option 4 appears to be focused on allowing for flexibility in the use of technology.

*Option 4. Allow hardware that secures technology to the trawl as long as the hardware does not appreciably change the intended performance of the trawl. Technology that may need to be secured to the trawl includes live-feed cameras, flow sensors, etc.*

As presently drafted, Option 4 would seemingly limit what hardware could be used to secure technology to pelagic trawl gear, but place no constraints on what technology could be attached. Option 4 provides two examples of technology that the Council contemplates being attached to the net (*i.e.*, live-feed cameras and flow sensors), but no other guidance as to the technology itself. As to the limits Option 4 would place on hardware securing technology to pelagic trawl gear, OLE also notes that, as regulatory text, language like “hardware that does not appreciably change the intended performance of the trawl” would be inconsistent with the Enforcement Precepts. Crafting a simple and straightforward definition of “appreciably change” would be difficult. Establishing the “intended performance” of a given trawl would be even more so. Similarly, establishing that hardware securing technology – as opposed to the technology itself or some other factor – caused a change in trawl performance would be challenging. Lastly, OLE is unclear as to what changes in trawl performance the Council seeks to prohibit given that, for instance, bycatch excluder devices are designed to change the performance of the trawl.

OLE respectfully requests that the Council clarify: (1) whether the Council intends for Option 4 to place any limits on the technology that may be attached to pelagic trawl gear (*i.e.*, as opposed to the hardware securing technology to the trawl net) and, if so, what those limits are; (2) what changes in trawl performance caused by hardware that the Council intends for Option 4 to prohibit or, alternatively, what metallic components the Council views as inconsistent with pelagic trawl gear.

## 5.4 Safety Considerations

Amendment 2, Option 1 would allow for vessel operators to choose metal components in codend design attached to pelagic trawl gear to improve safety on deck for crewmembers when hauling in catch. Full codends exert tremendous forces on a net; without rigid metal components, meshes or lines could potentially part and injure crew members on deck.

Excluding the codend from the definition of pelagic trawl gear would mean that boarding officers would need to inspect other portions of the net during at-sea boardings to identify the gear. Since the definition of pelagic trawl gear limits components at various locations throughout the net, this option may necessitate unfurling of a trawl net during at-sea boardings for enforcement personnel for inspection of forward portions of trawl nets. The further a net must be unfurled would require more time during at-sea

operations, and this could pose a risk to crew and authorized officers performing the inspection. However, because the current definition of pelagic trawl gear already includes provisions that limit forward and aft portions of the net, it is not expected that the time for at-sea boardings and gear inspection would increase substantially over the status quo. Likewise, any increased handling of a net while at sea during inspections and non-routine operations of the net could increase the opportunities for damage to the net.

## 6 Magnuson-Stevens Act and FMP Considerations

### 6.1 Magnuson-Stevens Act National Standards

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

A brief discussion of this action with respect to each National Standard will be prepared for Council final action.

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

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

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

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

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

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

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

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

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

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

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

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

The RIR prepared for this plan amendment constitutes the fishery impact statement. The likely effects of the proposed action are analyzed and described throughout the RIR. The effects on participants in the fisheries and fishing communities are analyzed in Chapter 4. The effects of the proposed action on safety of human life at sea are evaluated in Section 4.5, and will be considered above under National Standard 10, in Section 6.1.

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

## 6.3 Council's Ecosystem Vision Statement

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

### **Ecosystem Approach for the North Pacific Fishery Management Council**

#### *Value Statement*

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

#### *Vision Statement*

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

#### *Implementation Strategy*

The Council intends that fishery management explicitly take into account environmental variability and uncertainty, changes and trends in climate and oceanographic conditions, fluctuations in productivity for managed species and associated ecosystem components,

such as habitats and non-managed species, and relationships between marine species. Implementation will be responsive to changes in the ecosystem and our understanding of those dynamics, incorporate the best available science (including local and traditional knowledge), and engage scientists, managers, and the public.

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

Upon selection of a preferred alternative, this section will include the Council's rationale for how any action recommended to the Secretary of Commerce is consistent with this ecosystem approach to policy, and highlight evidence presented for that rationale to the extent that it is available. In considering this action, the Council is being consistent with its ecosystem approach policy. The proposed action will not change the assessment or management process for the BSAI pollock fishery or any vessels using pelagic trawl gear and will not affect how targeted fisheries are harvested. This action is focused on modifying the pelagic trawl gear definition. The actions in the Council's PA seek to ensure regulations do not restrict codend design attached to pelagic trawl gear, flotation within bycatch excluder devices, hardware attaching technology, and to remove outdated text related to parallel line trawls.

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