DRAFT FOR INITIAL REVIEW

Environmental Assessment/Regulatory Impact Review for Proposed Regulatory Amendment

To Modify Regulations Governing Maximum Retainable Amounts of Groundfish Species in the BSAI and GOA

March 18, 2025

Note: This EA/RIR has been revised from the original version released on March 14, 2025:

- The Management Considerations chapter now contains information on annual/seasonal MRA calculations, under Section 4.4.
- The Environmental Impacts chapter and the corresponding sections within the executive summary have been modified to clarify that no analysis has been conducted yet to understand impacts to Steller sea lion prey species in protection areas.
- Minor edits were incorporated throughout the document to clearly refer to protection areas rather than closed areas, and to correct the species listed in Section 3.3 and Appendix 2.

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Abstract: This Environmental Assessment/Regulatory Impact Review analyzes proposed management measures that would apply exclusively to vessels operating in the Bering Sea/Aleutian Islands (BSAI) and Gulf of Alaska (GOA) groundfish fisheries. The measures under consideration would revise maximum retainable amount (MRA) regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) applications of MRAs. Other measures under consideration include (1) revising the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships, (2) add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors, and (3) provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip. The purpose of this action is to improve the regulations that implement the MRA of species closed to directed fishing (incidental catch species) while a vessel operator is engaged in fishing for species or species groups that are open to directed fishing. These revisions are necessary to clarify current MRA regulations, make MRA calculations easier, reduce regulatory discards, and address medical, mechanical, and weather issues that can impact MRA calculations.

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

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Executive Summary

This Environmental Assessment/Regulatory Impact Review (EA/RIR) analyzes proposed management measures that would apply exclusively to vessels operating in the Bering Sea/Aleutian Islands (BSAI) and Gulf of Alaska (GOA) groundfish fisheries. The measures under consideration would revise maximum retainable amount (MRA) regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) applications of MRAs. Other measures under consideration include (1) revising the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships, (2) add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors, and (3) provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip. The purpose of this action is to improve the regulations that implement the MRA of species closed to directed fishing (incidental catch species) while a vessel operator is engaged in fishing for species or species groups that are open to directed fishing. These revisions are necessary to clarify current MRA regulations, make MRA calculations easier, reduce regulatory discards, and address medical, mechanical, and weather issues that can impact MRA calculations.

Purpose and Need

The North Pacific Fishery Management Council (Council) adopted the following purpose and need statement to originate this action on April 9, 2024 (NPFMC, 2024a).

> *The purpose of this action is to improve the regulations that implement the MRA of species closed to directed fishing (incidental catch species) while a vessel operator is engaged in fishing for species or species groups that are open to directed fishing. This action is necessary to clarify current MRA regulations, make MRA calculations easier, reduce regulatory discards, and address medical, mechanical, or weather issues that can impact MRA calculations. The Council intends to maintain the original intent of MRAs and is not considering changes that increase MRA percentages or changes in how MRAs assist in limiting harvest of a groundfish species within its annual total allowable catch.*

Alternatives

The Council adopted the following alternatives for analysis in April 2024. Alternatives 2, 3, 4 and 5 are not mutually exclusive.

Alternative 1, No Action

Under the No Action alternative, all regulations related to MRA would remain intact. Federal regulations at 50 CFR 679.20(e) establish MRAs as a percent of a basis species in Table 10 to part 679 for the GOA, Table 11 for the BSAI, and Table 30 for the Central GOA Rockfish Program (see Appendix 2 for complete tables). The percentage of a species closed to directed fishing that is retained in relation to a basis species must not be exceeded. In most cases, any additional catch amounts must be discarded at sea.

Alternative 2 – Revise MRA Regulations

This alternative would revise MRA regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) applications of MRAs. These changes would not change how the MRA regulations are currently implemented.

> **Option 1:** Modify the definition of a fishing trip to make it clear that motherships are responsible for the overall MRA of any catcher vessel delivering unsorted codends.

Option 2: Clarify that MRAs are calculated by fishery management program due to different fishing prohibitions in place for each fishery management program.
Option 3: Correct regulation citations for American Fisheries Act (AFA) vessels and AFA replacement vessels.
Option 4: Clarify that when Community Development Quota (CDQ) uses an AFA vessel to harvest Amendment 80 species BSAI pollock and Bering Sea (BS) Atka mackerel MRAs are calculated at the time of the offload and clarify the species used as basis species for CDQ.
Option 5: Clarify that MRAs take precedence over improved retention/improved utilization (IR/IU) regulations when vessels fish in areas with different fishing prohibitions.
Option 6: Update IR/IU regulations for Amendment 80 vessels to reflect past Council actions.

The Council passed a motion in June of 2024 to initiate a regulatory amendment analysis to address MRA calculations for Pacific ocean perch (POP) in the trawl electronic monitoring (EM) fisheries (NPFMC, 2024c). Given the similarity of Alternative 3 in the June 2024 motion with the purpose and need of the April 2024 MRA action to revise MRA regulations, analysts have included Alternative 3 of the June 2024 MRA POP motion in this analysis as Alternative 2, Option 7. Alternative 2 in the June 2024 motion was considered to be different enough from the purpose and need of the April 2024 motion to remain a separate action and require its own analysis. If the Council agrees with these staff recommendations, then the purpose and need statement for both MRA actions may need some minor revisions to reflect this change.

More detail is included in Section 2.2.1.

Option 7: *Revise the definition of directed fishing at 50 CFR 679.2 for vessels participating in the pelagic trawl EM program such that vessels deploying pelagic trawl gear are directed fishing for pollock if the amount of pollock is 80 percent or greater of total catch.*

Alternative 3 – Revise Triggers that End a Fishing Trip

This alternative would revise the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships (not including current offload-to-offload species - BSAI pollock, BS Atka mackerel, and weekly reporting period species in the Central GOA Rockfish Program). Two triggers would remain: (1) when all fish or fish product is offloaded and (2) if the vessel changes authorized gear type. Three triggers would be removed: (1) the effective date of a different fishing prohibition in the area the vessel is fishing, (2) when a vessel enters or leaves an area with a different fishing prohibition, and (3) the end of a weekly reporting period.

Alternative 4 – Add Additional Species to an Offload-to-Offload

This alternative would add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors. Continue to exclude AFA vessels for BSAI pollock and BS Atka mackerel from the offload calculation.

Option 1: Add BSAI Pacific cod, GOA Pacific cod, GOA pollock, BS skates, Central GOA Rockfish Program, and GOA shallow-water flatfish

Option 2: Include all groundfish species, except as noted above[1]

[1] Option 2 excludes the species noted within the main text of Alternative 4 - BSAI pollock and BS Atka mackerel, for AFA vessels.

Alternative 5 – Provide Exemptions from MRA Requirements

This alternative would provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip.

Economic and Social Impacts

Alternative 1

Under the No Action alternative, all regulations related to MRA would remain unchanged. Federal regulations at 50 CFR 679.20(e) establish MRAs as a percent of a basis species in Table 10 to part 679 for the Gulf of Alaska (GOA), Table 11 for the Bering Sea/Aleutian Islands (BSAI), and Table 30 for the Central GOA Rockfish Program (see Appendix 2 for a copy of these tables).The percentage of a species closed to directed fishing that is retained in relation to a basis species must not be exceeded. In most cases, any additional catch amount must be discarded at sea.

Additionally, under Alternative 1, the Alternative 2 MRA regulation adjustments to improve clarity and reflect current practices to help avoid confusion on MRA calculations will remain unchanged. Specifically, under Alternative 1 relative to Alternative 2, Options 1 through 7:

1. The definition of a fishing trip would remain unchanged thereby continuing to leave it unclear that motherships are responsible for the overall MRA of any catcher vessel (CV) delivering unsorted codends;
2. MRA regulations would remain unchanged leaving unclear MRAs are calculated by fishery management program due to different fishing prohibitions in place for each fishery management program;
3. MRA regulations would remain unchanged with regards to referencing the correct citations for AFA vessels and AFA replacement vessels;
4. MRA regulations would remain unchanged that would have clarified that when CDQ uses an AFA vessel to harvest Amendment 80 species, that MRA calculations for BSAI pollock and BS Atka mackerel are at the time of offload and leave unclear the regulations that would have identified the basis species used for CDQ;
5. MRA regulations would unchanged with regards to clarifying that MRAs take precedence over IR/IU regulations when vessels fish in areas with different fishing prohibitions;
6. leave IR/IU regulations for A80 vessels unchanged that would have reflected past Council actions; and
7. leave the definition of directed fishing at 50 CFR 679.2 unchanged for vessels participating in the pelagic trawl EM program such that vessels deploying pelagic trawl gear are directed fishing for pollock if the amount of pollock is 80 percent or greater of total catch.

Also under Alternative 1, changes to the number of fishing trip triggers that end a fishing trip for catcher/processors (C/Ps) and motherships as proposed in Alternative 3 would remain unchanged. There are currently five fishing trip triggers: (1) when all fish or fish product is offloaded, (2) if the vessels changes authorized gear type, (3) the effective date of a different fishing prohibition in the area that vessel is fishing, (4) when a vessel enters or leaves an area with a different fishing prohibition, and (5) the end of a weekly reporting period. Under Alternative 1, the effective date of different fishing prohibitions trigger, when a vessel enters or leaves an area with a different prohibition trigger, and the end of a weekly reported period trigger will remain in the regulations. In leaving these three trip triggers, vessels would continue to trigger multiple trips between offloads, which industry has testified is complicated and confusing as vessels need to track and calculate MRAs for each separate trip.

Alternative 1 would also leave in place the existing accounting period for most MRAs which applies at any time during a fishing trip as defined in regulation at § 679.2 Fishing trip. This MRA accounting period is known as "instantaneous," because the MRA may not be exceeded at any point in time during the fishing trip. Maintaining the existing MRA management period would continue to require vessels to discard any groundfish species over the MRA, if those species were closed to directed fishing. This is especially true during the early portion of a trip when a vessel does not have sufficient basis species and incidental caught species must be discarded over the MRA. Once the vessel has sufficient basis species to meet the instantaneous MRA calculation period, then the vessel operator can retain incidentally caught groundfish species up to the MRA for that species. For valuable incidental caught species, regulatory discards due to insufficient basis species to meet an instantaneous MRA calculation period results in lost revenue for the vessel. Instantaneous MRAs can lead to increased mortality rates for high-value incidental species. High-value incidental species that are regulatorily discarded earlier in the trip due to insufficient basis species will likely be targeted later in the trip once sufficient basis species are available on board (known as topping off). The additional fishing effort required to retain the same volume of incidental catch results in higher mortality under instantaneous MRAs, since the vessel operator would otherwise have retained the incidental catch earlier in the trip, and not engaged in additional fishing efforts to harvest the same incidental catch volume later in the trip.

Finally Alternative 1 would not change the MRA regulations to allow for exemptions in cases of medical emergencies, mechanical emergencies, or poor weather conditions. There have been instances where a vessel has come to port due to unforeseen circumstances such as an onboard medical emergency or mechanical issue. Because the vessel had to end their fishing trip earlier than expected, the vessel may end up over the MRA for one or more species if they have not accumulated enough basis species. Current regulation states that MRAs apply at any time and to all areas for the duration of the fishing trip, with the exception of BSAI pollock and BS Atka Mackerel for non-AFA vessels. If a vessel is over the MRA at the end of a fishing trip it is a violation, even if the vessel had to come to port due to a medical emergency, mechanical issue, or poor weather conditions. Under this alternative, provisions in regulations specifically addressing a vessel coming to port due to a medical emergency, mechanical issues, or poor weather conditions will not be addressed, and therefore a vessel operator would still be responsible to ensure they are not over an MRA, whether the calculation period is "instantaneous" throughout the fishing trip or offload-to-offload.

Alternative 2

Under Alternative 2 are several National Marine Fisheries Service (NMFS) proposed options that would modify MRA regulations. Note that none of this alternative is not intended to change how MRAs are currently being calculated. Alternative 2 is meant to clarify how things currently operate. These modifications would revise MRA regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) application of MRAs. Below is a description of Alternative 2 options and their expected effects. Additionally, the Alternative 2 expected effects section includes Option 7 as an additional option from the June 11, 2024 Council motion. Option 7 would revise the definition of directed fishing for vessels participating in the pelagic trawl EM program due to the similarity with the other options included in this alternative (see Section 2.6 for further information).

Option 1 – Modify the definition of a fishing trip to make it clear that motherships are responsible for the overall MRA of any CV delivering unsorted codends

Under the proposed action, the definition of a fishing trip would be clarified by adding language that states these triggers are met when a CV delivering unsorted codends and delivering to a mothership enters or leaves areas with a different directed fishing prohibition, or when a CV is using different authorized trawl gear. In addition, the definition of a CV fishing trip would be modified to exclude CVs delivering unsorted codends since harvest from those vessels is being accounted for on the mothership.

Option 2 – Clarify that MRAs are calculated by fishery management program due to different fishing prohibitions in place for each fishery management program

Vessels are often engaged in fishing for multiple management programs during a fishing trip. For example, a CV may be participating in both individual fishing quota (IFQ) and an open access (OA) fishery, a C/P may be participating in both Amendment 80 and a CDQ fishery, and a mothership may be taking deliveries from vessels engaged in both CDQ and OA. With the exception of the Rockfish Program (Table 30 to part 679), the MRA amounts in the GOA (Table 10 to part 679) and BSAI (Table 11 to part 679) remain the same regardless of which management program a vessel is fishing. However, the applicable MRA basis species may change depending on the management program. Changing management programs is not currently specifically listed as a criteria that would end a fishing trip nor is it currently mentioned in the application regulations for MRAs. However, vessels are calculating MRAs by management program based on the different applicable basis species. This would be made clear in the regulations by adding regulatory language specifically stating that MRAs are calculated by management program and listing those management programs. Management programs used to calculate different MRAs would include Amendment 80, Pacific cod trawl cooperative (PCTC), CDQ, IFQ, AFA, Aleutian Islands Pollock (AIP), Rockfish Program, and OA.

Option 3 - Correct regulation citations for AFA vessels and AFA replacement vessels

The MRAs for BSAI pollock and BS Atka mackerel are calculated at the end of each offload for all non-AFA vessels instead of at the end of each fishing trip. These offload regulations do not apply to vessels with an AFA permit or their replacement vessels. AFA vessels are required to calculate MRAs for BSAI pollock and BS Atka mackerel at any time during a fishing trip unless the vessel with an AFA permit is participating in CDQ and retaining Amendment 80 allocated species. Although these offload MRA regulations already exist, several aspects of these regulations need clarification.

The current MRA regulations do not reference the correct Code of Federal Regulations (CFR) citation for describing AFA permitted vessels for which the regulations do not apply. There are regulations at § 679.4(l) which specifically list out how and to whom AFA permits are issued. However, instead of citing these regulations, it currently cites Subpart F, which generally describes the AFA program and does not specifically cite the permits. Under the proposed action, the correct reference for listed AFA vessels, § 679.4(l), will be added to the MRA regulations to ensure industry and the National Oceanic and Atmospheric Association (NOAA) Office of Law Enforcement (OLE) can clearly identify vessels for which the regulations pertain.

Additionally, the MRA regulations also do not specifically include AFA replacement vessels. Specific vessel names are listed in § 679.4(l) as having AFA permits, but some of these vessels have been replaced since those regulations were implemented. Although this section of the regulations does discuss AFA replacement vessels, the revised MRA regulations under the proposed Option 3 would include a clause that states replacement AFA vessels are required to calculate MRAs for BSAI pollock and BS Atka mackerel at any time during a fishing trip.

Option 4 - Clarify that when CDQ uses an AFA vessel to harvest Amendment 80 species BSAI pollock and BS Atka mackerel MRAs are calculated at the time of the offload and clarify the species used as basis species for CDQ

Many AFA permitted vessels also participate in various CDQ fisheries. Some of this CDQ fishing is for the same species that are allocated to the Amendment 80 Program. In 2006, changes regarding the CDQ program were made to the Magnuson-Stevens Act and were implemented through NMFS rulemaking (77 FR 6492, February 8, 2012). These revisions stated that vessels participating in CDQ fisheries could not have more restrictions than vessels participating in non-CDQ fisheries. This means that if an Amendment

80 vessel is able to calculate MRAs for BSAI pollock and BS Atka mackerel from offload-to-offload, then a CDQ vessel (even if it is an AFA vessel) also fishing for Amendment 80 species should be able to do the same. Therefore, under Option 4, the regulations will be modified to clarify when a CDQ group uses an AFA vessel to harvest Amendment 80 species, the BSAI pollock and the BS Atka mackerel MRA will be calculated at the time of offload and the regulations will clarify the species used as basis species for CDQ.

Option 5 - Clarify that MRAs take precedence over improved retention/improved utilization (IR/IU) regulations when vessels fish in areas with different fishing prohibitions

There is a regulatory requirement to keep some species up to the MRA under the IR/IU program (§ 679.27). For CVs, this includes pollock, Pacific cod, and the shallow-water flatfish species complex in the GOA. Currently it is unclear whether MRA or IR/IU regulations take precedence regarding these species for CVs. Under the MRA regulations, it states that a CV who harvests fish from an area closed to directed fishing must apply the lowest MRA to all areas at all times for the duration of the fishing trip. However, the IR/IU regulations state that a CV has a minimum retention requirement for pollock, Pacific cod, and the shallow-water flatfish species complex in the GOA. If directed fishing is open for one of those species in an area a CV is active, then any of these species caught must be retained. If the species is closed for directed fishing, then a CV must retain the fish up to the MRA before any can be discarded. If the species is on prohibited for retention status, then the fish must be discarded. A fishing trip for a CV is currently defined from the time harvesting of groundfish begins until all fish or fish products have been offloaded. Furthermore, CVs are allowed by regulation to move between areas with different fishing prohibitions within the same fishing trip.

For example, a pot CV could begin a trip fishing for sablefish in the Bogoslof area where Pacific cod is closed to directed fishing. If Pacific cod is caught while harvesting sablefish, under the IR/IU regulations the CV is required to keep up to the MRA of Pacific cod (20 percent) before discarding. The CV may then move outside of Bogoslof to an area where both Pacific cod and sablefish are open to directed fishing. Under the MRA regulations, CVs would be restricted to keeping only 20% of Pacific cod because they already fished in an area closed to directed fishing for Pacific cod during their fishing trip. However, by discarding Pacific cod over the 20 percent MRA, the CV is then in violation of the IR/IU regulations that state all Pacific cod must be retained in areas where it is open to directed fishing.

NMFS and OLE currently direct industry to give precedence to the MRA regulations over IR/IU. In the example listed above, the CV would be required to discard any catch over the MRA amount, even when harvesting groundfish in an area open to Pacific cod directed fishing. A reasonable interpretation of the regulations is that once a CV fishes in an area closed to directed fishing, under the MRA regulations, directed fishing of that species is now closed in all areas to that CV. As a result, under the IR/IU regulations, the CV would discard any catch over the MRA amount because directed fishing is now closed to that vessel. To address this issue, Option 5 would clarify in regulations that the MRAs take precedence over IR/IU regulations when vessels fish in areas with different fishing prohibitions.

Option 6 - Update IR/IU regulations for Amendment 80 vessels to reflect past Council actions

IR/IU regulations are intricately connected to MRAs. As such, NMFS has identified additional IR/IU regulations that would be clarified under Option 6. Current regulations at § 679.27(b)(4), list all species in Table 2a[2] to part 679 (FMP groundfish) as IR/IU species for Amendment 80 C/Ps. Under this regulation, Amendment 80 C/Ps are required to retain all FMP groundfish species closed for directed fishing up to the MRA and make a percentage of it a primary product (§ 679.27(c)(2)). From 2008 to 2012, Amendment 80 vessels were subject to groundfish retention standards (GRS) which established

[2] Available at https://www.ecfr.gov/current/title-50/part-679/appendix-Table%202a%20to%20Part%20679

regulatory minimum retention levels of groundfish. These regulations were removed temporarily by an emergency rule in 2011 and permanently by a final rule in 2013. With the removal of GRS, Amendment 80 cooperatives stated their intent to maintain groundfish retention rates similar to GRS and are required to submit an annual Amendment 80 cooperative report to NMFS which includes information on the percent of groundfish retained for each cooperative (§ 679.5(s)(6)). Amendment 80 cooperative reports, which include retention information, are also presented to the Council annually. The final rule removing GRS stated that it removed certain regulatory requirements that mandated minimum levels of groundfish retention (78 FR 12627, 02/25/2013). The rule also states that Amendment 80 participants are subject to a 15 percent utilization standard for all retained FMP groundfish species (§ 679.27(i)). However, current IR/IU regulation still requires full (100%) retention of all FMP groundfish by Amendment 80 C/Ps. To address this issue, the § 679.27(b)(4) regulations would be updated under this option to make clear the intended utilization of 15 percent, and remove the full retention requirement of some FMP groundfish species for Amendment 80 C/Ps.

Option 7 – Revise the definition of directed fishing at 50 CFR 679.2 for vessels participating in the pelagic trawl EM program such that vessels deploying pelagic trawl gear are directed fishing for pollock if the amount of pollock is 80 percent or greater of total catch

The discard prohibition implemented in the trawl EM category inadvertently created a conflict for EM vessels when they encounter POP incidental catch that exceeds 5% of their catch. Though fishermen try to avoid harvesting POP while directed fishing for pollock because it has limited market value, vessels participating in the directed pollock fishery frequently encounter and incidentally catch POP because vessel operators cannot reliably differentiate between POP and pollock on sonar. If they encounter POP over the 5% MRA, they are prohibited from discarding catch in the EM program which then results in an MRA overage. Consequently, in the event of a high incidental catch haul, it may not be possible for a vessel to comply with the trawl EM category full retention requirement without violating the prohibition on directed fishing for POP by exceeding the MRA. In most cases, POP incidental catch remains below the 5% threshold. However, the POP biomass has increased in recent years, which has resulted in a higher rate of MRA overages.

To address these conflicting requirements for trawl EM category vessels, the approach recommended by the Council in the June 2024 motion would be to modify the regulatory definition of "directed fishing" to state that a vessel participating in the trawl EM category is directed fishing for pollock (and no other species) when 80% of delivered harvest is pollock. Currently, if a vessel retains more than 5% of aggregated rockfish species while fishing for pollock, the vessel is also considered to be directed fishing for POP. Modifying the directed fishing regulation for pollock would ensure compliance with full retention implemented for vessels participating in the trawl EM category without the unintended repercussions of having POP MRA overages. This modification is consistent with the goal of the trawl EM category, while also remaining consistent with the intent of the original MRA regulations. This approach provides clarity for vessels in the trawl EM category by eliminating unintended compliance issues stemming from the regulatory bind. Further, this change could provide additional benefits to the broader trawl EM category by modernizing fisheries management through offering greater flexibility in defining pollock fishing activities, reducing regulatory complexity, and improving alignment between monitoring needs and practical fishing operations.

Alternative 3

This alternative would revise the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships, for all species currently subject to offload-to-offload regulatory periods. Two triggers would remain: (1) when all fish or fish product is offloaded and (2) if the vessel changes authorized gear type. Three triggers would be removed: (1) the effective date of a

different fishing prohibition in the area the vessel is fishing, (2) when a vessel enters or leaves an area with a different fishing prohibition, and (3) the end of a weekly reporting period.

Under Alternative 3, C/Ps and motherships would calculate MRAs by summing all the retained species that are open to directed fishing as the basis species from the time the vessel began operating until the vessel offloaded or changed gear types. If, during a trip, a vessel participated in an area that is closed to directed fishing for a species, then that species would no longer be considered a basis species for that portion of the trip.

Eliminating the selected trip triggers would allow vessels to engage in longer fishing trips and encounter fewer trip restarts between offloads. Regulatory discarding of incidental species due to MRA requirements often occurs at the beginning of a fishing trip, when a vessel does not have a sufficient volume basis species onboard to act as a "ballast" they can count valuable incidental catch against. By reducing the number of trips a vessel triggers between offloads, this Alternative is expected to reduce regulatory discards that would have otherwise occurred under Alternative 1. By providing greater operational flexibility by increasing the length of fishing trips, this alternative may also provide a strong economic incentive to harvest high valued species up to their MRA amounts. Under Alternative 3, vessels will have increased opportunities to top off on valuable incidental catch at the end of the trip. The overall economic impact of reducing the triggers that end a fishing trip for C/Ps and motherships is expected to be positive for all sectors.

The magnitude of the economic impact of Alternative 3 is dependent on the current utilization of MRAs for valuable incidental species, the difference between the current trip length and the time a vessel goes between offloads (i.e. the amount of additional operational flexibility granted), and the strategic behavior of vessels, particularly around protection areas. If a vessel is currently able to harvest up to the MRA of valuable species for all fishing trips between offloads, then the fishing trip trigger reduction under Alternative 3 would have no economic impact. However, if the trip trigger length is constraining for vessels, and trips end before a vessel is able to harvest or accumulate their entire MRA allotment for valuable species, the additional flexibility granted in Alternative 3 may allow them to retain a higher volume of economically valuable incidental catch species then they otherwise would have under Alternative 1.

Given that the proportions that constitute many MRAs were designed to reflect the upper end of expected incidental catch rates, vessels may not only reduce regulatory discards but be able to increase harvest efforts for valuable incidental species under Alternative 3. This behavior, also referred to as "topping off," could occur inside protection areas or after directed fishing prohibitions have been put in place. Vessel behavior around protection areas may be altered, depending on the volume and composition of species the vessel has already harvested, a vessel operator's expectations of valuable incidental species presence and abundance inside protection areas, and their ability to avoid protection areas during a voyage.

Overall, eliminating the selected trip triggers for C/Ps and motherships under the proposed action would result in fewer, longer fishing trips, which would increase operational flexibility for vessels. This alternative would allow vessels that would have otherwise been forced to discard valuable incidental caught species at the beginning of trips triggered between offloads the opportunity to retain this economically valuable incidental caught species. It would also allow increased opportunities for vessels to "top off" at the end of each fishing trip on valuable incidental species not yet harvested to the full MRA.

Alternative 4 Options 1 and 2

This alternative would add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors. The alternative would continue to exclude AFA vessels for BSAI pollock and BS Atka mackerel from the offload calculation. There are two options under consideration:

Option 1: Add BSAI Pacific cod, GOA Pacific cod, GOA pollock, BS skates, Central GOA Rockfish Program, and GOA shallow-water flatfish

Option 2: Include all groundfish species, except as noted above[3]

Modifying the management period to an offload-to-offload period for specific species under Option 1 or nearly all ground species in the BSAI and GOA under Option 2 would allow vessels that would have otherwise been forced to discard groundfish species due to exceeding the MRA to retain these valuable groundfish species as long as they were under the MRA percentage at the time of offload. The overall economic impact of changing the MRA management period for all fisheries is expected to be positive for all sectors.

The main factors that would increase economic impact for all vessels are the values of the incidental catch species relative to the value of the basis species retained by the vessel, the cost and logistics of retaining and delivering a marketable fishery product, and the strategic behavior of individual vessels. If the incidental catch species has a lower value than the basis species, the change in the management period is unlikely to have any significant economic effect—vessels will continue to discard incidental catch species at current levels. If the incidental catch species has a higher relative value than the basis species, the impact from changing the management period could be economically positive.

With a potential reduction in overall catch of incidentally caught species due to the proposed change in the MRA management period, there would also likely be an increase in groundfish retention in the BSAI and GOA groundfish fisheries. Under Alternative 1, even though the vessel may want to retain a species, regulatory discards may be required if the vessel does not have sufficient basis species on board at that moment in time. Under the proposed action, vessels would be allowed to retain this incidental catch species prior to having sufficient basis species on board. Having the ability to retain this valuable incidental catch rather than discard it would likely increase the overall exvessel revenue and first wholesale revenue, increase the groundfish retention, and reduce regulatory discards in the fisheries affected by this action.

For C/Ps and motherships, applying all MRAs from offload-to-offload instead of instantaneously would be the simplest way to calculate MRAs. In this case, the vessel would no longer have to calculate instantaneous MRAs for the multiple concurrent regulatory fishing trips in which they may be engaged and would no longer have to ensure they did not exceed an MRA at any given moment of that fishing trip. Most C/Ps and motherships maintain daily fishing logbooks, have observers on board (with a few exceptions for C/Ps who have low harvest), weigh catch on board, and complete daily production reports. However, in order to ensure a vessel is within the MRA amount at any given time, retained and discarded catch would need to be calculated at each point in time of the fishing trip. This can be a complicated and long process, especially if the vessel was engaged in multiple concurrent fishing trips. It would be easier to calculate MRAs if they applied only at the fishing trip level instead of at any point in time, or if they were always calculated offload-to-offload. If, for example, a hook-and-line C/P remains at sea for three weeks fishing open access Pacific cod, the vessel would no longer have to track MRAs instantaneously saving on costs associated with discarding MRA overages throughout the three-week period which would likely improve revenues for the vessel and reduce waste of valuable groundfish species.

For CVs there is not a mechanism to ensure that a CV is not over the MRA while in the middle of a fishing trip without an at-sea enforcement presence. Total retained catch is not sorted and weighed onboard CVs. Therefore, it is difficult to determine and enforce if a CV is within the allowed MRA at any given moment of the fishing trip. Altering current regulations to allow for all MRAs on CVs to apply from offload-to-offload would be easier to enforce. In addition, it may be less confusing for a non-AFA CV operator to treat all MRA species the same instead of having some calculated from offload-to-offload

[3] Option 2 excludes the species noted within the main text of Alternative 4 - BSAI pollock and BS Atka mackerel, for AFA vessels.

(i.e., BSAI pollock and BS Atka mackerel) and others calculated instantaneously (i.e., Pacific cod, Greenland turbot, octopus, etc.).

Overall, modifying the management period for the specific species under Option 1 or all species under Option 2 to an offload-to-offload period under the proposed action would allow vessels that would have otherwise been forced to discard these valuable incidental caught species under an instantaneous MRA calculation period due to not enough basis species onboard the vessel would now have the opportunity to retain this economically valuable incidental caught species. The ability to retain these valuable incidental caught species that would otherwise be discarded under status quo would likely reduce regulatory discards and increase revenue for participating vessels. Therefore, the overall economic impact of changing the MRA management period under Option 1 or Option 2 is expected to be positive.

Alternative 5

This alternative would provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip. There have been instances where a vessel has come to port due to unforeseen circumstances such as an onboard medical emergency or mechanical issue. Because the vessel had to end their fishing trip earlier than expected, the vessel may end up over the MRA for one or more species if they have not accumulated enough basis species. Though documented, the dual occurrence of an emergency and an MRA overage is rare. Between 2021 and 2024 OLE documented four instances in which a medical or mechanical issue forced an unexpected return to port and contributed to an MRA overage. Based on the low rate of occurrence and the near automated process of detecting and documenting MRA overages, OLE recommends continuing to assess overages on a case-by-case basis. An exemption made due to weather would be far more subjective and therefore difficult to enforce. These options can be examined more closely at a future Enforcement Committee meeting, and included in the final action document.

Environmental Impacts

Alternatives 1 and 2

Alternative 1, the status quo, would maintain current MRA management including instantaneous enforcement of MRAs while vessels are fishing. Alternative 2 would maintain the MRA management program in regulation and would not change MRAs or affect other fishery management measures. As such, Alternative 2 is a regulatory amendment that would ease reporting requirements and potentially increase efficiency in reporting and management of the fishery. Alternative 2 is not expected to create any adverse environmental effects.

Alternatives 3 and 4

Alternative 3 would revise the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships (not including current offload-to-offload species - BSAI pollock, Bering Sea (BS) Atka mackerel, and weekly reporting period species in the Central GOA Rockfish Program). These changes are analyzed in a series of possible scenarios of fleet behavior (Section 5.3) that estimate reductions in regulatory discards that are considered beneficial. However, while the level of regulatory discards could be decreased, there is the potential for increased harvest of incidentally caught species in Steller sea lion protection areas if vessels change their behavior. While the overall decrease in regulatory discards can be viewed as environmentally beneficially, the risk of increased incidental catch in protected areas could have potentially negative effects for Steller sea lions. It is hard to predict how a vessel will change behavior. If the trigger for calculation of an MRA in relation to protection areas is removed, it could create an incentive for vessels to change the location of the fishery and harvest more in protection areas without additional tools to limit change in behavior.

Alternative 4 would add specific target species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors. The alternative would continue to exclude AFA vessels for BSAI pollock and BS Atka mackerel from the offload calculation. The expected effects of these changes are detailed in Section 5.4. That analysis has identified that there may be an enhanced risk of approaching ABC and OFL for some species. Table 5-22 identifies the species that may be at risk. It is hard to predict how vessel operators may change behavior with offload to offload. It may provide more clarity to a vessel operator on what they are allowed to retain and allow them to maximize harvest of valuable species. However under offload to offload calculation, they can retain amounts encountered earlier in a trip rather that discard it as they have to under status quo. This should allow more retention overall without increasing overall harvest, in fact it may decrease harvest when compared to the maximum obtained under status quo. Any target or incidentally caught species that approaches fishery limits will be actively managed by in-season management staff to prevent overfishing. Thus, though these risks are identified in the analysis they are expected to be mitigated by existing fishery management mechanisms and are not considered to be environmentally significant. In addition, and similar to effects of Alternative 3, depending on vessel behavior, incidental catch could potentially increase in protection areas. If a vessel waited until the end of a trip under Alternative 4 to top off on incidental catch species and chose to do so in a protection area, the amount of basis species onboard would likely be greater for that trip than under status quo and the overall amount of incidental catch in the protection area would be greater than under status quo. One example of a method that could mitigate this could be requiring that MRAs be calculated offload-to-offload for each area they fished with different MRAs. For example, if a vessel fished in both an SSL area and a non-SSL area while at sea, at the time of offload the vessel would calculate their MRAs from harvest within the SSL area separately from MRAs outside an SSL area. This would prevent topping off activity inside an SSL area from including basis species harvested outside the SSL area, thus lowering the amount of harvest taken in sensitive areas.

Alternative 5

Alternative 5 would provide exemptions from MRA regulations in cases of medical emergency, mechanical breakdowns, or adverse weather. These exemptions would enhance vessel safety and are expected to have positive effects for fishermen and their families and would not measurably affect harvest, revenue, or other environmental factors. While terminating a trip may result in added sea time on later trips and may possibly affect overall cost of production, these effects are not considered to be environmentally significant.

Comparison of Alternatives for Decision-making

Table ES 1 shows a high-level comparison of the impacts of Alternative 1, Alternative 2 Options 1-6, Alternative 2 Option 7, Alternative 3, Alternative 4 Options 1 & 2, and Alternative 5.

Table ES-1 Comparison of Alternatives

	Alternative 1, No Action	Alternative 2, Options 1-6	Alternative 2, Option 7	Alternative 3	Alternative 4, Options 1 & 2	Alternative 5
Description	MRA regs. remain unchanged.	Implement MRA reg. adjustments that reflect current practices, improve clarity, and help avoid confusion.	Adjust directed fishing definition for vessels in the PTR EM program. If pollock is >80% of total catch volume, vessel is only directed fishing for pollock.	Remove three of five regulatory triggers that end a fishing trip for C/Ps and motherships.	Change MRA accounting period from instantaneous to offload-to-offload for certain species (species differ between options)	Implement regulatory exemptions from MRA requirements in cases of medical, mechanical, or weather emergencies that end a fishing trip.
Management & Enforcement Considerations						
Regulatory Complexity	Status quo conditions.	Improves clarity in current regulations & reflects current operations/OLE guidance.	Removes conflicting regulatory requirements for PTR EM vessels that harvest above the MRA (simultaneous retention and discard prohibitions)	Reduction in trip ending triggers decreases MRA calculation complexity for C/Ps and motherships.	Likely simpler to calculate MRAs for C/Ps and motherships, & simpler to enforce MRAs for CVs. May reduce confusion for operators.	May require codifying parameters that constitute an emergency.
Enforcement	Status quo conditions.	Clarifies regulations; easier for OLE to interpret and enforce.	Removes regulatory bind; easier for vessels to remain in compliance.	Concerns surrounding OLE's ability to enforce area closures. Vessels targeting incidental species (i.e. topping off) inside protection areas are not in violation of any regulation under this Alt.	Concerns surrounding OLE's ability to enforce area closures. Vessels targeting incidental species (i.e. topping off) inside protection areas are not in violation of any regulation under this Alt.	Exemptions due to weather may be difficult to define & enforce; will be examined at Enforcement Committee meeting.
Groundfish Retention and Discards						
Regulatory Discards	Status quo conditions.	Status quo conditions.	May reduce discards for PTR EM vessels in regulatory bind, if vessel chooses to violate discard regs. rather than directed fishing regs. under status quo.	Likely to result in reductions in regulatory discards. Reduction in regulatory discards is viewed as economically & environmentally beneficial.	Likely to result in reductions in regulatory discards. Reduction in regulatory discards is viewed as economically & environmentally beneficial.	May reduce discards in rare cases.

Table ES-1, Continued

	Alternative 1, No Action	Alternative 2, Options 1-6	Alternative 2, Option 7	Alternative 3	Alternative 4, Options 1 & 2	Alternative 5
Economic Impacts						
Overall Economic Impacts	Status quo conditions.	No impacts.	No impacts.	Expected to be positive. Magnitude of impact varies & is reliant on changes in strategic vessel behavior.	Expected to be positive. Magnitude of impact varies & is reliant on changes in strategic vessel behavior.	Neutral to positive; vessels may avoid regulatory violations in rare cases.
Environmental Impacts						
Target & Non-target Species	Status quo conditions.	No impacts.	No impacts.	Potential for increased harvest of incidental catch species inside protection areas. Magnitude and distribution of impact dependent on changes in vessel behavior around protection areas.	Limited potential & risk of approaching ABC and OFL for certain species. Risks mitigated by existing fishery mgmt. mechanisms; therefore not considered to be environmentally significant. Potential for increased harvest of incidental catch species inside protection areas. Magnitude and distribution of impact dependent on changes in vessel behavior around protection areas.	No impacts.
Marine Mammals (SSL)	Status quo conditions.	No impacts.	No impacts.	Potential for increased harvest of SSL prey species in SSL protection areas. Magnitude and distribution of impact dependent on vessel behavior.	Potential for increased harvest of Pacific cod in SSL protection areas. Magnitude and distribution of impact is dependent on vessel behavior.	No impacts.

Specific Items for Council Attention

June 2024 MRA POP Motion, Included as Alternative 2, Option 7

The Council passed a motion in June of 2024 to initiate a regulatory amendment analysis to address MRA calculations for Pacific ocean perch (POP) in the trawl EM fisheries (NPFMC, 2024b). Given the similarity of Alternative 3 in the June 2024 motion with the purpose and need of the April 2024 MRA action to revise MRA regulations, analysts have included Alternative 3 of the June 2024 MRA POP motion in this analysis as Alternative 2, Option 7. Alternative 2 in the June 2024 motion was considered to be different enough from the purpose and need of the April 2024 motion to remain a separate action and require its own analysis. More information on this item is included in Section 2.2.1. If the Council agrees with these staff recommendations, then the purpose and need statement for both MRA actions may need some minor revisions to reflect this change.

Steller Sea Lion Protection Area Concerns, and Prior Council Actions

The Council took final action on an item similar to Alternative 4 of the April 2024 motion in December of 2006. An MRA accounting interval change (from instantaneous to offload-to-offload) was proposed, but was later withdrawn and never implemented. The item seen by the Council in 2006 sought to decrease the interval of MRA calculations for the head and gut (H&G) trawl C/P sector, and included several groundfish species. Before taking final action on the item, the Council determined that a relaxed interval would increase incentives to harvest incidental catch of prey species (Pacific cod and Atka mackerel) in Steller sea lion (SSL) protection areas, and allow vessels to accumulate basis species from outside of the SSL protection areas to use as a basis for retaining Atka mackerel or Pacific cod caught within a protection area. To address this problem, the Council revised the preferred alternative so that a new fishing trip would be triggered if an H&G trawl C/P entered or left certain SSL protection areas in the BSAI, and that the MRA accounting interval not be changed from the status quo (remain instantaneous) in these areas.

Proposed rules were published in February 2009. Later that same year (December 2009), NMFS withdrew the proposed rule after receiving withdrawal requests from representatives of the H&G trawl C/P sector. Industry noted that the proposed rule, as amended, would no longer assist the sector in increasing the value of groundfish catches. More information on this topic is available in Section 3.2.

Analysts note that the enforcement concerns associated with these Alternatives (identified within Section 4.3), and the potential environmental impacts in Steller sea lion protection areas (identified within Sections 6.1.2 and 6.4.3) are similar to the concerns that the Council's December 2006 revision sought to remedy. If the Council concurs with the rationale and language of their December 2006 revision, then the Council could consider revising Alternatives 3 and/or 4 to add similar language. If the Council wishes to keep Alternatives 3 and 4 as-is, analysts have noted that the impacts of the action could rise to a significance level that may require an environmental impact analysis under NEPA and a section 7 consultation under the ESA before a final rule could be published.

Use of MRAs as Enforcement Tools in Protection Areas

OLE has expressed concerns in their ability to enforce targeting of a species in an area closed to that species for directed fishing when MRAs are calculated from offload to offload. Under current regulation, BSAI pollock and BS Atka mackerel are subject to offload-to-offload MRAs, which have been proven to not prevent topping off behavior inside spatial closures. Furthermore, because the directed fishing prohibition has not been violated if a vessel intentionally targets these species inside closed waters, there is no enforcement action. If MRAs for other species were also calculated offload to offload, it would increase the ability to top off on these species inside protection areas as well.

The directed fishing prohibition and use of MRAs are the tools currently used to try and limit the catch taken. OLE notes that MRAs are somewhat inadequate in prohibiting the targeting of species inside protection areas, under both instantaneous or offload-to-offload calculations. Although offload to offload calculations give vessels a greater ability to engage in topping off behavior inside a protection area, instantaneous MRA calculations do not completely prevent this behavior, and also allow targeting of fish inside protection areas. Alternative methods exist that may be more effective in preventing targeted fishing inside protection areas. Several examples of methods that may be effective alternatives include harvest limits, closing the areas to all fishing, using target to define directed fishing instead of the MRA calculation, or not allowing targeted hauls inside the areas at any time, to name a few. Alternative measures could take the place of using MRAs to try and control the total amount of harvest taken from inside these areas and may be more suitable.

More information on this topic is available in Section 4.3.

Directed Fishing Definition, and Interrelation with MRA Definition

The directed fishing definition (§ 679.2 Directed Fishing) is interrelated with the definition of an MRA. Unless otherwise indicated in regulation, directed fishing is defined as any fishing activity that results in the retention of an amount of a species on board a vessel that is greater than the MRA for that species. The current definition does not do a very good job of identifying directed fishing as it relates to the retention of a species in relation to all other species aboard a vessel, not actual harvest. The definition hinges on the primary assumption that a vessel that retains a higher volume of one species intended to target or directed fish for that species. In reality, a vessel may target a high-value species without going over the MRA (known as topping off) or accidentally go over the MRA for an undesirable species (as described in Alternative 2 Option 7). This definition remains an interrelated issue as many gear requirements, gear prohibitions, and protection areas surrounding sensitive sites hinge on the assessment of a vessel's directed fishing activity.

This definition was implemented in a time where fisheries were managed via weekly production reports faxed to the agency. Data availability has expanded considerably since this definition was originally developed, notably the availability of trip-specific data on target species. Because this data exists, alternative methods of defining directed fishing (such as linking it to the trip target species, for example), are now possible. An alternative method may be more closely aligned with the original intent, and that may be a more effective tool for management goals.

1 Introduction

This Environmental Assessment/Regulatory Impact Review analyzes proposed management measures that would apply exclusively to vessels operating in the BSAI and GOA groundfish fisheries. The measures under consideration would revise maximum retainable amount (MRA) regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) applications of MRAs. Other measures under consideration include (1) revising the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships, (2) add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors, and (3) provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip. The purpose of this action is to improve the regulations that implement the MRA of species closed to directed fishing (incidental catch species) while a vessel operator is engaged in fishing for species or species groups that are open to directed fishing. These revisions are necessary to clarify current MRA regulations, make MRA calculations easier, reduce regulatory discards, and address medical, mechanical, and weather issues that can impact MRA calculations.

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

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 groundfish fishery in the EEZ off Alaska are managed under both the BSAI and GOA FMPs for groundfish. 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 on April 9, 2024 (NPFMC, 2024a).

> *The purpose of this action is to improve the regulations that implement the MRA of species closed to directed fishing (incidental catch species) while a vessel operator is engaged in fishing for species or species groups that are open to directed fishing. This action is necessary to clarify current MRA regulations, make MRA calculations easier, reduce regulatory discards, and address medical, mechanical, or weather issues that can impact MRA calculations. The Council intends to maintain the*

original intent of MRAs and is not considering changes that increase MRA percentages or changes in how MRAs assist in limiting harvest of a groundfish species within its annual total allowable catch.

1.2 History of this Action at the Council

During the October 2023 NMFS report, the agency identified some challenges with current regulations governing MRAs that are needed to improve clarity, efficiency, and effectiveness. To address these needed changes, NMFS identified during the October meeting that it was preparing a discussion paper for the Council to review and, if warranted, to develop a purpose and need statement, alternatives, and initiate an analysis.

In addition, NMFS also received a proposal from the industry requesting a modification of fishing trip definitions (triggers) for applying MRA calculations in BSAI and GOA groundfish fisheries. Industry identified complexities with applying MRAs when vessels are participating in more than one management program and highlighted that the current MRA structure may lead to unnecessary regulatory discards.

Following the presentation by NMFS identifying the challenges with current MRA regulations, the Council at the October 2023 meeting approved the following motion to support NMFS in their preparation of a MRA discussion paper:

> *The Council appreciates that NMFS is preparing a discussion paper concerning MRA management. The Council recommends that the discussion paper include: a description of the complexities resulting from current regulations for vessels participating in multiple fisheries and/or in multiple management areas; potential regulatory changes that could be made to modify trip triggers for the purpose of calculating and determining MRA calculations; potential changes to applying MRAs at offload instead of instantaneously; how those changes could reduce regulatory discards; and compliance considerations for vessels that are subject to unforeseen medical or mechanical issues during a trip.*

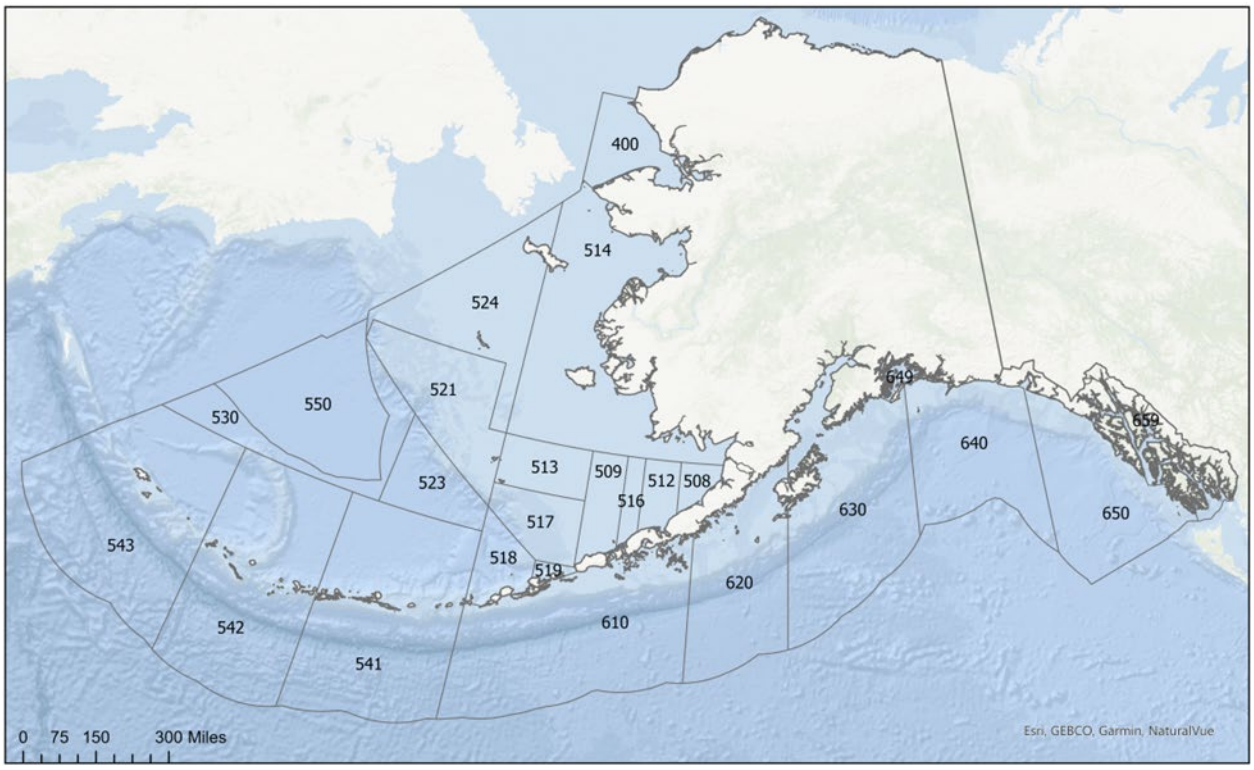
During the April 2024 Council meeting, a discussion paper was presented by NMFS staff in response to the October 2023 motion to inform potential adjustments to the MRA of incidental catch species closed to directed fishing while a vessel operator is engaged in fishing for species or species groups that are open to directed fishing (NPFMC, 2024b). The paper considered potential regulatory changes that could be made to modify fishing trip triggers for the purpose of calculating and determining MRA calculations; potential changes to applying MRAs at offload instead of instantaneously; how those changes could reduce regulatory discards; and compliance considerations for vessels that are subject to unforeseen medical or mechanical issues during a trip. The paper also provided information about how the MRA regulations could be modified to reflect current practices, to give an overview of industry proposed regulatory changes, and to provide possible regulatory changes that could be assessed.

After reviewing the paper and receiving testimony, the Council took action to move the paper forward to an initial review analysis. The Council adopted a purpose and need statement (see Section 1.1) and developed alternatives and options for analysis (see Section 2).

1.3 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 and Aleutian Islands and the Gulf of Alaska



1.4 EA and RIR requirements

Environmental Assessment

There are four required components for an environmental assessment. The need for the proposal is described in Section 1.1, and the alternatives in Chapter 2. The probable ecological impacts of the proposed action and alternatives are addressed in Chapter 6, and social and economic impacts in Chapter 5. A list of agencies and persons consulted is included in Chapter 8.

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.*

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

- Have an annual effect on the economy of $100 million or more (adjusted every 3 years by the Administrator of the Office of Information and Regulatory Affairs (OIRA) 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, territorial, or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in this Executive order.

1.5 Documents Incorporated by Reference in this Analysis

The documents listed below contain information about the fishery management areas, fisheries, marine resources, ecosystem, social, and economic elements of the groundfish fisheries. They also include prior analyses of the effects of the fisheries on the human environment and are referenced when relevant in the analysis of impacts throughout this document.

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

This Environmental Impact Statement (EIS) provides decision makers and the public an evaluation of the environmental, social, and economic effects of alternative harvest strategies for the federally managed groundfish fisheries in the GOA and the Bering Sea and Aleutian Islands management areas and is referenced here for an understanding of the groundfish fishery. The EIS examines alternative harvest strategies that comply with Federal regulations, the Fishery Management Plan (FMP) for Groundfish of the GOA, the FMP for Groundfish of the BSAI Management Area, and the Magnuson-Stevens Fishery Conservation and Management Act. These strategies are applied using the best available scientific information to derive the total allowable catch (TAC) estimates for the groundfish fisheries. The EIS evaluates the effects of different alternatives on target species, non-specified species, forage species, prohibited species, marine mammals, seabirds, essential fish habitat, ecosystem relationships, and economic aspects of the groundfish fisheries.[4]

Alaska Marine Mammal Stock Assessments, 2023 (Young et al. 2023)

Marine mammal Stock Assessment Reports (SARs) are published annually[5] under the authority of the Marine Mammal Protection Act (MMPA) for all stocks that occur in state and federal waters of the Alaska region. Individual SARs provide information on each stock's geographic distribution, population estimates, population trends, and estimates of the potential biological removal (PBR) levels for each stock. See additional information in Section 6.4.

Stock Assessment and Fishery Evaluation Reports for the Groundfish Resources of the BSAI and GOA (NPFMC 2024d).

Annual Stock Assessment and Fishery Evaluation (SAFE) reports[6] review recent research and provide estimates of the biomass of each species and other biological parameters. The SAFE report includes the acceptable biological catch (ABC) specifications used by NMFS in the annual harvest specifications. The

[4] Available from https://alaskafisheries.noaa.gov/fisheries/groundfish-harvest-specs-eis
[5] Available from https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports
[6] Available from https://www.npfmc.org/library/safe-reports/

SAFE report also summarizes available information on the ecosystems and the economic condition of the groundfish fisheries off Alaska.

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

The Final Programmatic Supplemental Environmental Impact Statement (PSEIS)[7] evaluates the Alaska groundfish fisheries management program as a whole and includes analysis of alternative management strategies for the GOA and BSAI groundfish fisheries. The Environmental Impact Statement (EIS) is a comprehensive evaluation of the status of the environmental components and the effects of these components on target species, non-specified species, forage species, prohibited species, marine mammals, seabirds, essential fish habitat, ecosystem relationships, and economic aspects of the groundfish fisheries. A Supplemental Information Report (NPFMC and NMFS 2015) was prepared in 2015 which considers new information and affirms that new information does not indicate that NMFS and the Council need to supplement the 2004 PSEIS..

Biological Opinion on authorization of groundfish fisheries under the BSAI and GOA FMPs and State of Alaska parallel fisheries (NMFS 2010).

The 2010 biological opinion[8] replaced in part the 2000 biological opinion. The 2010 biological opinion concluded that the groundfish fisheries, as authorized, were likely to jeopardize the continued existence of only the Western distinct population segment (DPS) Steller sea lion and adversely modify designated critical habitat for Steller sea lions. The 2010 biological opinion also concluded that the fisheries, as implemented, were not likely to jeopardize the continued existence of humpback, sperm, or fin whales. The jeopardy and adverse modification finding in the 2010 biological opinion was based on potential connections between the continued decline of Western DPS Steller sea lion populations in the western and central Aleutians and the Aleutian Islands Atka mackerel, pollock, and Pacific cod fisheries. NMFS subsequently modified Steller sea lion protection measures in the Aleutian Islands Atka mackerel and Pacific cod fisheries in 2011 (75 FR 77535, December 13, 2010; corrected 75 FR 81921, December 29, 2010) and in the Aleutian Islands Atka mackerel, pollock, and Pacific cod fisheries in 2015 (79 FR 70286, November 25, 2014) to ensure the fisheries were not likely to jeopardize the continued existence of the Western DPS or adversely modify the designated critical habitat.

Authorization of groundfish fisheries in the Aleutian Islands under the proposed revised Steller sea lion Protection Measures (NMFS 2014).

This consultation[9] considered the Federal groundfish fisheries and State of Alaska parallel groundfish fisheries for Atka mackerel, Pacific cod, and pollock primarily in the Aleutian Islands subarea. This consultation also considered proposed research to better understand the potential effects of these fisheries on Steller sea lions and on the efficacy of conserving prey in areas closed to fishing. NMFS determined that the action, as proposed, was not likely to jeopardize the continued existence of the Western DPS of Steller sea lions or destroy or adversely modify its designated critical habitat.

[7] Available from https://repository.library.noaa.gov/view/noaa/19481
[8] Available from https://www.fisheries.noaa.gov/resource/document/biological-opinion-authorization-alaska-groundfish-fisheries
[9] Available from https://www.fisheries.noaa.gov/resource/document/final-environmental-impact-statement-steller-sea-lion-protection-measures

Biological Opinion on authorization of groundfish fisheries under the GOA FMP and State of Alaska parallel fisheries (NMFS 2024).

This consultation[10] considered the federal groundfish fisheries and State of Alaska parallel groundfish fisheries in the Gulf of Alaska. NMFS determined that the continued operation of the GOA groundfish fisheries, as they currently operate, were not likely to jeopardize the continued existence of listed humpback whales, fin whales, sperm whales, Steller sea lions, listed fish evolutionary significant units (ESUs), the proposed listed sunflower sea star, or destroy or adversely modify designated critical habitat.

1.6 Methodology for Analysis of Impacts

The evaluation of impacts in this analysis is designed to meet the requirement of E.O. 12866, which dictates that an RIR evaluate the costs and benefits of the alternatives, to include both quantifiable and qualitative considerations. Additionally, the analysis should provide information for decision makers "to maximize net benefits (including potential economic, environment, public health and safety, and other advantages; distributive impacts; and equity), unless a statute requires another regulatory approach." The costs and benefits of this action with respect to these attributes are described in the sections that follow, comparing the No Action Alternative 1 with the action alternatives. A qualitative assessment of the net benefit to the Nation of each alternative, compared to no action then follows.

This analysis was prepared using data from the NMFS catch accounting system (CAS), which is the best available data to estimate total catch in the groundfish fisheries off Alaska. Total catch estimates are generated from information provided through a variety of required industry reports of harvest and at-sea discard, and data collected through an extensive fishery observer program. In 2003, NMFS changed the methodologies used to determine catch estimates from the NMFS blend database (1995 through 2002) to the CAS (2003 through present).

The CAS was implemented to better meet the increasing information needs of fisheries scientists and managers. Currently, the CAS relies on data derived from a mixture of production and observer reports as the basis of the total catch estimates. The 2003, modifications in catch estimation included providing more frequent data summaries at finer spatial and fleet resolution, and the increased use of observer data. Redesigned observer program data collections were implemented in 2008 to include recording sample-specific information in lieu of pooled information, increased use of systematic sampling over simple random and opportunistic sampling, and decreased reliance on observer computations. As a result of these modifications, NMFS is unable to recreate blend database estimates for total catch and retained catch after 2002. Therefore, NMFS is not able to reliably compare historical data from the blend database to the current CAS.

[10] Available from https://www.fisheries.noaa.gov/resource/data/2024-economic-status-groundfish-fisheries-alaska

2 Description of Alternatives

National Environmental Policy Act (NEPA) requires that an EA analyze a reasonable range of alternatives consistent with the purpose and need for the proposed action. The alternatives in this chapter were designed to accomplish the stated purpose and need for the action. The measures under consideration would revise maximum retainable amount (MRA) regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) applications of MRAs. Other measures under consideration include (1) revising the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships, (2) add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors, and (3) provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip. The purpose of this action is to improve the regulations that implement the MRA of species closed to directed fishing (incidental catch species) while a vessel operator is engaged in fishing for species or species groups that are open to directed fishing. These revisions are necessary to clarify current MRA regulations, make MRA calculations easier, reduce regulatory discards, and address medical, mechanical, and weather issues that can impact MRA calculations.

The Council adopted the following alternatives for analysis in April 2024 (NPFMC, 2024a). Alternatives 2, 3, 4 and 5 are not mutually exclusive.

2.1 Alternative 1, No Action

Under the No Action alternative, all regulations related to MRA would remain intact. Federal regulations at 50 CFR 679.20(e) establish MRAs as a percent of a basis species in Table 10 to part 679 for the Gulf of Alaska (GOA), Table 11 for the Bering Sea/Aleutian Islands (BSAI), and Table 30 for the Central GOA Rockfish Program (full tables available in Appendix 2). The percentage of a species closed to directed fishing that is retained in relation to a basis species must not be exceeded. In most cases, any additional catch amounts must be discarded at sea.

2.2 Alternative 2 – Revise MRA Regulations

This alternative would revise MRA regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) applications of MRAs. These changes would not change how the MRA regulations are currently implemented.

Option 1: Modify the definition of a fishing trip to make it clear that motherships are responsible for the overall MRA of any catcher vessel delivering unsorted codends.

Option 2: Clarify that MRAs are calculated by fishery management program due to different fishing prohibitions in place for each fishery management program.

Option 3: Correct regulation citations for American Fisheries Act (AFA) vessels and AFA replacement vessels.

Option 4: Clarify that when Community Development Quota (CDQ) uses an AFA vessel to harvest Amendment 80 species BSAI pollock and BS Atka mackerel MRAs are calculated at the time of the offload and clarify the species used as basis species for CDQ.

Option 5: Clarify that MRAs take precedence over improved retention/improved utilization (IR/IU) regulations when vessels fish in areas with different fishing prohibitions.

Option 6: Update IR/IU regulations for Amendment 80 vessels to reflect past Council actions.

2.2.1 Alternative 2 Option 7

During the June 2024 meeting, the Council initiated a regulatory amendment analysis to address MRA calculations for Pacific ocean perch (POP) in the trawl EM fisheries (NPFMC, 2024b). The Council developed a purpose and need statement and two action alternatives for consideration. The purpose and need statement and alternatives are as follows:

> *With the implementation of electronic monitoring for pelagic trawl fisheries (trawl EM), NMFS will require vessels to retain and deliver all catch and exempt vessels from the prohibition on retaining catch above maximum retainable amounts (MRAs), to reduce regulatory discards and improve catch accounting. NMFS will continue to use MRA calculations to determine directed fishing to ensure compliance with other fishery regulations. Currently, POP catch in the pelagic trawl fisheries accrues towards the aggregated rockfish category MRA of 5 percent. The combination of the new requirements to retain all catch in the trawl EM program and increasing POP biomass necessitates evaluating the current regulations to resolve unintended consequences that may result from the retention, MRA, and directed fishing requirements.*
>
> *Alternative 1: No Action*
>
> *Alternative 2: Remove POP from the aggregate rockfish category for pollock targets and establish a separate POP MRA for calculation of directed fishing that reflects the intrinsic rate of POP bycatch in pollock fisheries under regulations at 50 CFR 679.20(e) and Table 10 to part 679.*
>
> *Alternative 3: Revise the definition of directed fishing at 50 CFR 679.2 for vessels participating in the pelagic trawl EM program such that vessels deploying pelagic trawl gear are directed fishing for pollock if the amount of pollock is 80 percent or greater of total catch.*

Given the similarity of the revision to the directed fishing trip for vessels participating in the pelagic trawl EM program (Alternative 3) with the purpose and need of the April 2024 MRA action to revise MRA regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) applications of MRAs, staff recommends this alternative be moved from the June 2024 motion and included in the larger April 2024 MRA motion. **This alternative has been included in the analysis as Alternative 2, Option 7.**

The June 2024 alternative removing POP from the aggregate rockfish category for pollock targets and establishing a separate POP MRA (Alternative 2) is different enough from the purpose and need of the April 2024 MRA revisions action that it would likely require its own separate action and analysis. If the Council agrees with these staff recommendations, then the purpose and need statement for both MRA actions may need some minor revisions to reflect this change. Should the Council determine the new Alternative 2, Option 7 option is warranted then further action of analysis of the June motion would not be needed as the problem that that motion sought to remedy would be solved.

2.3 Alternative 3 – Revise Triggers that End a Fishing Trip

This alternative would revise the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships (not including current offload-to-offload species - BSAI pollock, Bering Sea (BS) Atka mackerel, and weekly reporting period species in the Central GOA Rockfish Program). Two triggers would remain: (1) when all fish or fish product is offloaded and (2) if the vessel changes authorized gear type. Three triggers would be removed: (1) the effective date of a different fishing prohibition in the area the vessel is fishing, (2) when a vessel enters or leaves an area with a different fishing prohibition, and (3) the end of a weekly reporting period.

2.4 Alternative 4 – Add Additional Species to an Offload-to-Offload

This alternative would add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors. Continue to exclude AFA vessels for BSAI pollock and BS Atka mackerel from the offload calculation.

Option 1: Add BSAI Pacific cod, GOA Pacific cod, GOA pollock, BS skates, Central GOA Rockfish Program, and GOA shallow-water flatfish

Option 2: Include all groundfish species, except as noted above[11]

2.5 Alternative 5 – Provide Exemptions from MRA Requirements

This alternative would provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip.

[11] Option 2 excludes the species noted within the main text of Alternative 4.

3 Description of Fisheries

3.1 Description of Management

An MRA, defined at § 679.20(3)[12], both limits and allows for some retention of species closed to directed fishing (incidental catch species) while a vessel operator is engaged in fishing for species or a species group that are open to directed fishing (basis species). Specifically, an MRA is the maximum round weight of a species closed to directed fishing that may be retained on board a vessel. An MRA allows for retention of inevitable incidental catch in the fisheries for other targets, preventing regulatory discards. This allows for increased utilization of catch in cases where a directed fishery is not possible. Although MRA percentages limit the incentive to target an incidental catch species, fishermen can top-off their retained catch with these incidental species up to the MRA amount by deliberately targeting them. MRA percentages may serve as a management tool to slow the harvest rates of incidental catch species by limiting the amount that can be retained on board a vessel, but this tool is imprecise and oftentimes is not very effective in limiting overall harvest. MRA percentages reflect a balance between the need to reduce the harvest rate of incidental catch species and the desire to minimize regulatory discard of the incidental catch species.

MRAs assist in limiting harvest of a groundfish species within its annual total allowable catch (TAC) by removing incentives to target a specific groundfish species. However, it is an imprecise tool to limit harvest. Overharvest can still occur because the MRA, as stated above, only limits retention. NMFS closes a species to directed fishing before the entire TAC is taken to leave sufficient amounts of the TAC available for incidental catch in other fisheries. Nonetheless, the catch may exceed the TAC (because discards still accrue towards the TAC). If a species TAC is exceeded NMFS will prohibit retention of this species thereby removing all financial incentive to harvest that species. This prohibition of retention does not stop harvest, especially if the species is truly incidentally caught. However, the prohibition of the retention prevents any intentional harvest or targeting of that species to maximize financial gain. If a species overfishing limit (OFL) is approached, NMFS issues closures or prohibitions for fisheries in which the species is taken as incidental catch in order to prevent overfishing. Table 3-1 and Table 3-2 provide the BSAI and GOA groundfish harvest specifications, which include the acceptable biological catch, OFL, and TAC from 2020 through 2024.

There are a few situations that require mandatory retention of some species either up to the MRA amount or over the MRA, which inadvertently creates a regulatory conflict. Improved Retention/Improved Utilization (IR/IU) regulations (§ 679.27) apply to BSAI and GOA pollock and Pacific cod, GOA shallow-water flatfish, and all Fisheries Management Plan (FMP) species caught by non-American Fisheries Act (AFA) listed catcher/processors (C/Ps). The IR/IU regulations require that vessels retain all of the IR/IU species if it is open to directed fishing and retain up to the MRA if the IR/IU species is closed to directed fishing. IR/IU species must be discarded when in prohibited retention status. Since the calculation of MRAs are based on overall retention, this is hard to precisely estimate while at sea and vessel operators are faced with dueling regulations, either be safe and face a violation of the IR/IU regulation or exceed the MRA. NMFS and OLE currently direct catcher vessels (CVs) to give precedence to the MRA regulations over IR/IU. A reasonable interpretation of the current regulations is that once a vessel fishes in an area closed to directed fishing, under the MRA regulations, directed fishing of that species is now closed in all areas to that vessel. As a result, under the IR/IU regulations, the vessel would discard anything over the MRA amount because directed fishing is now closed to that vessel.

In addition, full retention of halibut and sablefish is required if there is an individual fishing quota (IFQ) holder onboard with available IFQ (§ 679.7(f)(11)) during the IFQ season. Discarding of rockfish species is also prohibited for CVs using hook-and-line, pot, and jig gear in the BSAI and GOA (§ 679.7(a)(5)),

[12] The full regulatory language of the MRA definition at § 679.20(3) is available in Appendix 3.

even if the rockfish species is on prohibited retention status. Full retention of most species is required for trawl vessels participating in the electronic monitoring (EM) program while harvesting BS or GOA pollock.

The MRAs are established as a percent of a basis species at Table 10 to part 679 for the GOA, Table 11 for the BSAI, and Table 30 for the Central GOA Rockfish Program (full tables available in Appendix 2). The percentage of a species closed to directed fishing that is retained in relation to a basis species must not be exceeded. In most cases, any additional catch amounts must be discarded. For example, when Pacific cod is open to directed fishing (basis species) in the BSAI, and arrowtooth flounder is closed to directed fishing (incidental catch species), a vessel operator may retain a round weight equivalent amount of arrowtooth flounder of up to 35 percent (found in Table 11) of the round weight equivalent of the Pacific cod retained on board the vessel. In this example, all catches of arrowtooth flounder in excess of the 35 percent MRA must be discarded:

- Pacific cod total retained catch (basis species) = 100 mt
- Arrowtooth flounder MRA for Pacific cod as the basis species = 35%
- Arrowtooth flounder MRA = 35 mt

Every retained basis species (open for directed fishing) may be used to calculate an aggregate MRA. If yellowfin sole was also open for directed fishing in the example above, then more arrowtooth flounder may be retained relative to yellowfin sole as a basis species. In this example, all catches of arrowtooth flounder in excess of the allowed combined MRA amount for Pacific cod and yellowfin sole must be discarded:

- Pacific cod total retained catch (basis species) = 100 mt
- Arrowtooth flounder MRA for Pacific cod as the basis species = 35%
- Yellowfin sole total retained catch (basis species) = 100 mt
- Arrowtooth flounder MRA for yellowfin sole as the basis species = 35%
- Arrowtooth flounder MRA = 35 mt for Pacific cod + 35 mt for yellowfin sole = 70 mt

Most MRAs apply at any time during a fishing trip as defined in regulation at § 679.2 Fishing trip. This MRA accounting period is known as “instantaneous,” because the MRA may not be exceeded at any point in time during the fishing trip. This is very imprecise and hard for vessel operators to quantify. It is also very hard to monitor and enforce with catch being stored in refrigerated seawater tanks and not accessible to crew or boarding agents. Vessels worried about exceeding MRA amounts early in a trip will discard these fish that may have otherwise been retained. If the species has value the same vessel may also target that species and retain it, resulting in more harvest overall. This is why MRAs are considered to increase discards or waste, and not considered to be an effective tool to limit catch overall.

A few exemptions exist that require calculations of the MRA at the time of offload or at the end of a weekly reporting period. The first exception allows the MRA for all vessels not listed in subpart F of this section (i.e., non-AFA trawl vessels), for pollock harvested in the BSAI (§ 679.20(e)(3)(iii)) and Atka mackerel in the BS (§ 679.20(e)(3)(v)) to be calculated at the end of each offload and are based on the basis species harvested since the previous offload. The purpose of this exception was to reduce regulatory discards of pollock and BS Atka mackerel. In addition, MRAs for C/Ps fishing under a rockfish cooperative fishing quota permit in the Central GOA are calculated at the end of each weekly reporting area (§ 679.20(e)(3)(iv)) and are based on the basis species harvested since the previous reporting period.

MRAs also are used in two situations in the groundfish Community Development Quota (CDQ) fisheries: (1) to regulate retention in areas closed to directed fishing for some groundfish CDQ species, but not for others, and (2) to regulate retention for groundfish species that are not allocated to the CDQ Program, but are caught incidentally in the groundfish CDQ fisheries. In the first case, some areas of the BSAI are closed to directed fishing for pollock, Pacific cod, and Atka mackerel in Steller sea lion (SSL) protection areas. These closures apply to both CDQ and non-CDQ fishing for these species. Directed fishing for

other species that are targeted by groundfish vessels in both their CDQ and non-CDQ fisheries is allowed in these areas. If a vessel is fishing on behalf of a CDQ group inside an area closed to directed fishing for a particular groundfish species, then retention of that groundfish species is limited by MRAs.

In the second case, some TAC categories will not be allocated to the CDQ Program. These include Bogoslof pollock, BS Pacific ocean perch (POP), shortraker rockfish, blackspotted/rougheye rockfish, northern rockfish, "other rockfish," Aleutian Islands (AI) Greenland turbot, Kamchatka flounder, Alaska plaice, "other flatfish," skates, sharks, and octopuses. Catch in the CDQ fisheries of species in TAC categories that are not allocated to the CDQ Program will be managed under the regulations and fishery status that applies to the TAC category in all BSAI groundfish fisheries.

The directed fishing definition (§ 679.2 Directed Fishing) is interrelated with the definition of an MRA. Unless otherwise indicated in regulation, directed fishing is determined by any fishing activity that results in the retention of an amount of a species on board a vessel that is greater than the MRA for that species. Directed fishing, established by assessing the MRA of a particular species, remains a significant and interrelated issue as many gear requirements (i.e., modified non-pelagic trawl (NPT) for flatfish), gear prohibitions (i.e., NPT for pollock in BSAI), and protection areas surrounding sensitive sites (i.e., SSL protection areas) hinge on the assessment of a vessel's directed fishing activity. Multiple calculations using Tables 10, 11 and 30 to part 679 are required by regulation to assess directed fishing activity in varied regulatory areas, notably for flatfish under § 679.2 Directed Fishing (5) and (6). The definition of directed fishing is different from the trawl fishery categories listed in regulation, for the purpose of apportioning the trawl prohibited species catch (PSC) limits under § 679.21.

A groundfish fishing trip begins when fishing gear is deployed by a vessel and meets any of the regulatory conditions of a fishing trip at § 679.2. By regulation, several conditions end a trip for catcher processors and motherships (based on whichever condition occurs first).

A fishing trip is defined at 50 CFR 679.2 as:

> *(1) With respect to retention requirements (MRA, IR/IU, and pollock roe stripping), recordkeeping and reporting requirements under § 679.5, and determination of directed fishing for flatfish.*
>
> > *(i) Catcher/processors and motherships. An operator of a catcher/processor or mothership processor vessel is engaged in a fishing trip from the time the harvesting, receiving, or processing of groundfish is begun or resumed in an area until any of the following events occur:*
> > > *(A) The effective date of a notification prohibiting directed fishing in the same area under § 679.20 or § 679.21;*
> > > *(B) The offload or transfer of all fish or fish product from that vessel;*
> > > *(C) The vessel enters or leaves an area where a different directed fishing prohibition applies;*
> > > *(D) The vessel begins fishing with a different type of authorized fishing gear; or*
> > > *(E) The end of a weekly reporting period, whichever comes first.*
> >
> > *(ii) Catcher vessels. An operator of a catcher vessel is engaged in a fishing trip from the time the harvesting of groundfish is begun until the offload or transfer of all fish or fish product from that vessel.*

3.2 The Development and Evolution of MRA Regulations

The evolution and development of MRA regulations and management has been occurring in the BSAI and GOA groundfish fisheries for decades (see Section 3.1 for a description of the current MRA management). MRA management superseded the use of "directed fishing standards" to regulate groundfish harvest. The implementation of MRA management included establishing the regulations and associated tables for MRAs in general. Over time, the MRA regulations have been modified to incorporate various changes to MRA management for different species (e.g., sablefish,

shortraker/rougheye rockfish, pollock, skates), management programs (e.g. Rockfish Program), MRA timing (e.g. BSAI pollock and BS Atka mackerel), and changes to MRA percentages. Past regulatory actions associated with MRA management[13] are listed in Appendix 1.

MRA and the definition of directed fishing were part of Amendment 9 that was implemented in 1985. This was a time period where monitoring and record keeping and reporting were in its infancy in the North Pacific. This time period of management predates any of the current tools we use for management. For example, catcher vessel fisheries were managed by weekly production reports submitted by a processor that did not have vessel or trip specific amounts. The MRA was applied at the processor level for a week-long period. Therefore the definition of directed fishing makes sense if the majority of catcher vessels were not avoiding harvest of that species and had chosen to deliver the catch for profit. In the modern era, the precision of management has been drastically increased by the availability of trip specific data.

Of the history of MRA changes in regulatory packages that are listed in Appendix 1, three are associated with changing an MRA calculation interval from instantaneous to offload, similar to the proposed Alternative 4 in this action. In addition to these three MRA changes, the Council saw another item similar to Alternative 4 in October of 2014, and ultimately decided to take no further action on the item at the time.

1) 2004, 69 FR 32901

The first is the BSAI pollock MRA change from instantaneous to offload for non-AFA vessels to allow for greater utilization of pollock and reduce discards. It was noted that under these regulations, vessels will be able to choose to retain pollock in excess of the MRA as long as the amount retained at the time of offload is at the specified MRA percentage with respect to basis species or species groups retained. By allowing vessels to manage their MRA percentage for pollock on an offload-to-offload basis, additional pollock may be retained over the course of a fishing trip.

2) 2009, 74 FR 7209 (proposed rule), and 74 FR 65503 (withdrawal)

The second MRA calculation interval change, which was proposed but was later withdrawn and never implemented, was for the head and gut (H&G) trawl C/P sector (now called the Amendment 80 sector) and included several groundfish species. In October 2005, the Council received a request from head & gut (H&G) trawl C/P sector to revise the MRA accounting interval so as to reduce mandatory groundfish discards by the sector. The H&G trawl C/P sector requested that the calculation interval for MRAs be changed for some groundfish species from instantaneous to an offload to offload. They noted that substantial portions of groundfish discarded in the BSAI were regulatory discards and included species that have economic value to the sector. The sector noted that increasing the interval for accounting of an MRA would assist in both reducing (i.e., increasing catch retention) and reducing costs (i.e., increasing revenues) to the sector.

At the April 2006 meeting, the Council developed a problem statement and three alternatives for implementing a change to the MRA accounting procedure. The proposed action would have applied to MRAs for yellowfin sole, rock sole, flathead sole, "other flatfish," arrowtooth flounder, Pacific cod, and Atka mackerel in the BSAI, and for Pacific ocean perch (POP) in the Aleutian Islands (AI). At that meeting, the Council considered adding additional sectors to the problem statement for this proposed adjustment to MRA accounting, however, no other BSAI groundfish sectors expressed interest in expanding the analysis beyond the H&G trawl C/P sector.

[13] These regulatory actions are summarized and available at the following: https://www.fisheries.noaa.gov/action/maximum-retainable-amount-mra-alaska-fisheries-federal-register-rules-and-notices

At the December 2006 meeting, the Council took final action on the preferred alternative. The Council recommended that the H&G trawl C/Ps while fishing in the BSAI, calculate the MRA of yellowfin sole, rock sole, flathead sole, Pacific cod, "other flatfish," arrowtooth flounder, AI POP, and BS and AI Atka mackerel. The Council also determined that a relaxed interval would increase incentives to harvest incidental catch of prey species (Pacific cod and Atka mackerel) in Steller sea lion (SSL) protection areas. To address this problem, the Council recommended that the MRA accounting interval not be changed from the status quo for Pacific cod inside SSL protection areas in the BSAI, nor for Atka mackerel inside SSL protection areas in the AI (retaining instantaneous MRA accounting for these species in these defined areas). The Council later confirmed that they intended for MRA accounting to apply at any time during a fishing trip for Atka mackerel in the SSL protection areas of the BS. Additionally, the Council recommended a new fishing trip begin anytime an H&G trawl C/P enters or leaves a SSL protection area closed to directed fishing for Atka mackerel in the AI, or Pacific cod in the BSAI. This additional fishing trip trigger was intended to prevent a vessel from accumulating basis species from outside of the SSL protection areas, to use as a basis for retaining Atka mackerel or Pacific cod caught within a protection area.

Proposed rules were published in February 2009. Later that same year (December 2009), NMFS withdrew the proposed rule because representatives of the H&G trawl C/P requested the withdraw. It was noted that the proposed rule will no longer assist the sector in increasing the value of groundfish catches, and it would not provide the intended flexibility to increase retention of groundfish in the BSAI. Sector members stated that they will not make use of the additional MRA accounting interval because all members of the single cooperative formed under Amendment 80 have an allocation for Amendment 80 species and since these Amendment 80 fisheries never close for directed fishing to the majority of vessels in this sector. Additionally, the sector states that the cost of the proposed action would exceed the benefits of the sector because vessel operators would find it more difficult to retain Atka mackerel and Pacific cod inside Steller sea lion protection areas. Retaining Atka mackerel and Pacific cod inside Steller sea lion protection areas could be made more difficult because of insufficient amounts of basis species available inside Steller sea lion protection measures for matching with incidental catch of Pacific cod and Atka mackerel. That could have the effect of requiring these operators to discard these valuable species.

3) 2014, FR 79 70286

The third action is contained within the SSL protection measures issued in 2014, and changed the MRA accounting interval for Bering Sea Atka mackerel from instantaneous to offload-to-offload. This change was implemented in order to reduce regulatory discards, and to allow greater harvest of Atka mackerel in the Bering Sea rather than the Aleutian Islands. Atka mackerel was primarily harvested in the Aleutian Islands at the time this rule was implemented, and the Council's action intended to further disperse the harvest of Atka mackerel spatially relative to existing management measures. This allowed more Atka mackerel TAC to be harvested in the Bering Sea rather than the Aleutian Islands.

4) October 2014 Discussion Paper

In December 2013, the Council initiated a regulatory amendment adjusting the MRA management period from instantaneous to time of offload for all fisheries in the BSAI and GOA. The intent of the action was to increase efficiency and reduce regulatory discards. The benefit of the proposed action was that vessels could choose to retain species that are closed to directed fishing in excess of the MRA as long as the amount retained at the time of offload is at the specified MRA percentage with respect to the basis species or species group retained. At the February 2014 meeting, the Council provided further clarification that staff should prepare a discussion paper prior to preparing the analysis for the proposed regulatory action. During the October 2014 meeting, the Council reviewed the discussion paper[14] on adjusting the MRA

[14] Available from https://meetings.npfmc.org/Meeting/Details/446, under C6 MRA management Period.

management period. After reviewing the discussion paper, the Council took no further action on the issue. The Council noted that the complexity of changing the management period for all MRA species in the BSAI and GOA in a single action and the potential changes to fishing behavior for all of these MRA species as a result of this action make it difficult to accomplish in a single action. The Council noted that it would like to review changes to the MRA management period for MRA species on a case-by-case basis brought forward by the public.

3.3 Description of BSAI and GOA Groundfish Species

Provided below is a brief description of each BSAI and GOA groundfish fisheries by species. Provided in the description of the BSAI and GOA groundfish fisheries are several tables. The MRA regulations identify basis and incidental species retention on different timeframes and species compositions and are not discernable in NMFS's catch accounting system's target calculations. Vessels may retain numerous groundfish species. If several species are caught together (which is generally the case), the predominant retained species is assigned as the target. The amount of annual retained and discarded species within each of the fisheries does not reflect the MRA proportions, but rather, multiple species, caught together in the groundfish and halibut IFQ fisheries, where the target species comprised the majority of the catch. These tables provide all the species that are caught in conjunction with the target groundfish fisheries.

3.3.1 Bering Sea and Aleutian Islands

EBS Pollock

The annual BS pollock fishery is divided into two seasons: the "A" season, which opens in January and typically ends in April, and the "B" season, which typically runs from June 10 through the end of October. The "A" season fishery has historically focused on roe-bearing females and is concentrated north and west of Unimak Island and along the 100-meter contour between Unimak and the Pribilof Islands. "A" season pollock also provide other primary products such as surimi and fillet blocks, but yields on these products are slightly lower than in the "B" season, when pollock carry a lower roe content and are, thus, primarily processed for surimi and fillet blocks. The "B" season fishery takes place west of 170° West longitude of the Bering Sea. The BS pollock fishery is managed under a cooperative structure defined by the AFA. The fishery is prosecuted by relatively large vessels using pelagic trawl gear. The average retention of pollock during 2020 through 2024 was 99 percent (Table 3-3). The primary incidental catch species in the pollock target fishery were Pacific cod, POP, flathead sole, and sablefish while BS pollock is also caught incidentally in several target fisheries including yellowfin sole, rock sole, Pacific cod, flathead sole, and rockfish (Table 3-4). The MRA for BS pollock as an incidental catch species is 20 percent for all basis species in BSAI, while the MRA for all the different incidental caught species when pollock is the basis species ranges from a low one percent for high valued species like Greenland turbot and sablefish to a high of 35 percent for arrowtooth flounder and Kamchatka flounder (Table 11, Appendix 2). The average exvessel price during 2020 through 2023 for pollock was $229 per metric ton (mt) (Table 3-3).

BSAI Pacific cod

Presently, the Pacific cod stock is exploited by a multiple-gear fishery, including trawl, longline, pot, and jig components (although catches by jig gear are very small in comparison to the other three main gear types, with an average annual catch of less than 200 mt since 1991) and is a fully utilized fishery. Table 3-3 shows the average total catch for the period 2020 through 2024. Amendment 49, which mandated increased retention and utilization of BSAI Pacific cod, was implemented in 1998. The average 2020-2024 retention rate for BSAI Pacific cod was 99 percent (Table 3-3). The primary incidental catch species in the Pacific cod target fishery were skates and pollock while BSAI Pacific cod is also caught

incidentally in several target fisheries including yellowfin sole, pollock, rock sole, Atka mackerel, and flathead sole (Table 3-4). The MRA for BSAI Pacific cod as incidental catch species is 20 percent amongst the different basis species, while the MRA for the different caught incidental species when Pacific cod is the basis species ranges from a low one percent for high valued species like Greenland turbot and sablefish to a high of 35 percent for arrowtooth flounder and Kamchatka flounder (Table 11, Appendix 2). The average exvessel price for Pacific cod during 2020 through 2023 was $572 per mt (Table 3-3).

Sablefish

Sablefish are harvested with trawl, longline, and pot gear. Most sablefish are taken with longline gear in the Aleutian Islands and pot gear in the Bering Sea. The sablefish season is open seven months usually beginning in March, concurrent with the halibut fishing season. The average 2020-2024 retention rate for BSAI sablefish was 78 percent (Table 3-3). The primary incidental catch species in the sablefish target fishery were Kamchatka flounder, arrowtooth flounder, other rockfish, and pollock while BSAI sablefish is also caught incidentally in several target fisheries including Kamchatka flounder, rockfish, arrowtooth flounder, and Atka mackerel (Table 3-4). The MRA for BSAI sablefish as an incidental catch species in the different basis species is one percent for most basis species but is 15 percent for Greenland turbot and the different rockfish species while the MRA for the different incidental caught species when sablefish is the basis species generally is 20 percent for most species but does range from a low two percent for biological sensitive aggregated forage fish to a high of 35 percent for arrowtooth flounder and Kamchatka flounder (Table 11, Appendix 2). The average exvessel price for sablefish during 2020 through 2023 was $1,849 per mt (Table 3-3).

Atka mackerel

Atka mackerel, most abundant in the AI, is allocated to each of three districts in the AI and is further divided between two seasons. The majority of the Atka mackerel TAC is directly allocated to the Amendment 80 vessels. The average 2020-2024 retention rate for BSAI Atka mackerel was 99 percent (Table 3-3). The primary incidental catch species in the Atka mackerel target fishery were POP, northern rockfish, Pacific cod, and pollock while BSAI Atka mackerel is also caught incidentally in the target northern rockfish fishery (Table 3-4). The MRA for Atka mackerel as an incidental catch species in the is 20 percent for all the basis species, while the MRA for the different caught incidental species when Atka mackerel is the basis species is typically 20 percent for most species but does range from a low one percent for high valued species like Greenland turbot and sablefish to a high of 35 percent for arrowtooth flounder and Kamchatka flounder (Table 11, Appendix 2). The average exvessel price for Atka mackerel during 2020 through 2023 was $402 per mt (Table 3-3).

Flatfish fisheries

For nearly all of the flatfish fisheries, most of the fishing effort comes from trawl vessels. Until 2008, both trawl and non-trawl fisheries for non-CDQ flatfish in the BSAI were prosecuted under a single TAC. In 2008, Amendment 80 to the BSAI FMP was implemented, which allocated up to 93 percent of the yellowfin sole TAC (depending on the TAC), 100 percent of the rock sole TAC, and 100 percent of the flathead sole TAC to the non-AFA trawl catcher processors after deductions for the CDQ program and incidental catch. The remaining portion of the yellowfin sole TAC was allocated to the remaining trawl sectors. The average 2020-2024 retention rate for flathead sole was 92 percent, rock sole was 96 percent, and yellowfin sole was 98 percent (Table 3-3). The primary incidental caught species in the flathead sole target fishery were pollock, yellowfin sole, and Pacific cod, while flathead sole was caught incidentally primarily in the yellowfin sole and pollock target fisheries (Table 3-4). For rock sole target fishery, the primary incidental caught species were yellowfin sole, pollock, Pacific cod, and Alaska plaice, while incidental catch rock sole occurred mostly in the yellowfin sole target fishery. For the yellowfin sole

target fishery, the primary incidental caught species were pollock, Alaska plaice, rock sole, and Pacific cod, while incidental caught yellowfin sole occurred mostly in the rock sole and flathead sole target fisheries. The MRAs for flathead sole, rock sole, and yellowfin sole as an incidental catch species are generally 20 percent for most basis species with a few basis species at 35 percent, while the MRAs for the different incidental species when these three flatfish species are basis species is typically 20 percent but does range from a low one percent for high valued species like Greenland turbot and sablefish to a high of 35 percent for arrowtooth flounder and Kamchatka flounder (Table 11, Appendix 2). The average exvessel price for flathead sole, rock sole, and yellowfin sole during 2020 through 2023 were $245 per mt, $279 per mt, and $287 per mt, respectively (Table 3-3).

Kamchatka flounder and Arrowtooth flounder

Two flatfish species in the BSAI, Kamchatka flounder and arrowtooth flounder, are treated separately from the other flatfish species in this description given the differences in the fisheries for these two species. Kamchatka flounder are similar to arrowtooth flounder and were combined in catch records until recently. Arrowtooth flounder and Kamchatka flounder are very similar in appearance, so are difficult to distinguish in the commercial catches. The average 2020-2024 retention rate for Kamchatka flounder and arrowtooth flounder were 97 percent and 83 percent, respectively (Table 3-3). The primary incidental catch species in the Kamchatka flounder target were arrowtooth flounder and rockfish while Kamchatka flounder was caught incidentally in the target arrowtooth flounder, pollock, POP, and sablefish fisheries (Table 3-4). For the arrowtooth flounder fishery, pollock, sablefish, flathead sole, and POP were caught incidentally, while arrowtooth flounder was caught primarily in the yellowfin sole, Kamchatka flounder, and flathead sole target fisheries (Table 3-4). The MRA for both Kamchatka flounder and arrowtooth flounder as an incidental catch species in the is generally 35 percent for all the basis species, while the MRA for the different caught incidental species when Kamchatka flounder and arrowtooth flounder are the basis species is typically 20 percent for most species but does range from a low 7 percent to 1 percent for those species were topping off is discouraged (Table 11, Appendix 2). The average exvessel price for Kamchatka flounder and arrowtooth flounder during 2020 through 2023 were $315 per mt and $281 per mt, respectively (Table 3-3).

Greenland turbot

In the Greenland turbot fishery, both trawl and hook-and-line gears are active participants in this fishery. By gear type and area, trawl catch of Greenland turbot was most significant in the AI, whereas in the BS, hook-and-line vessels catch a majority of the Greenland turbot. Unlike other BSAI flatfish species, Greenland turbot has historically had a low OFL, ABC, and TAC. During 2024, the OFL for Greenland turbot was 3,705 mt, while the ABC and TAC were equal at 3,188 mt (Table 3-1). The average 2020-2024 retention rate for BSAI Greenland turbot was 96 percent (Table 3-3). The primary incidental catch species in the Greenland turbot target fishery were Kamchatka flounder and sablefish while BSAI Greenland turbot is also caught incidentally in the target Kamchatka flounder fishery (Table 3-4). The MRA for Greenland turbot as an incidental catch species ranges from 1 percent for primary fisheries like Pacific cod, yellowfin sole, pollock Atka mackerel to 35 percent for rock fish and sablefish fisheries, while the MRA for the different caught incidental species when Greenland turbot is the basis species is typically 20 percent for most species but does have lower MRAs percent for high valued species like Greenland turbot and sablefish and other more sensitive species (Table 11, Appendix 2). The average exvessel price for Greenland turbot during 2020 through 2023 was $1,017 per mt (Table 3-3).

POP

Pacific ocean perch (POP) is currently the only open rockfish directed fishery in the BSAI and is caught primarily in bottom trawl fisheries. POP is allocated among the three Aleutian Island districts and the eastern Bering Sea, based on biomass distribution. The AI fishery is concentrated during the summer

months. Since 1996, the majority of the catch (by weight) occurred in the western Aleutian Islands. Starting in 2008, POP was allocated under the Amendment 80 program. The average 2020-2024 retention rate for POP was 96 percent (Table 3-3). The primary incidental catch species in the POP target fishery were Atka mackerel and pollock while POP is also caught incidentally in the target Atka mackerel and pollock fisheries (Table 3-4). The MRA for POP as incidental catch species in the basis species fisheries is included in the "aggregated rockfish" category and the MRA ranges from 5 percent to 15 percent. The MRA for POP as a basis species is included in the "other rockfish" category and the MRAs are generally 20 percent for most species but does range from a low seven percent for forage fish to a high of 35 percent for arrowtooth flounder, Kamchatka flounder, and Greenland turbot (Table 9-2). The average exvessel price for POP during 2020 through 2023 was $268 per mt (Table 3-3).

Northern rockfish

Northern rockfish is currently managed as an incidental catch allowance (ICA), and is generally caught in Atka mackerel and POP fisheries (Table 3-4). The average 2020-2024 retention rate for BSAI Atka mackerel was 99 percent (Table 3-3). The MRA for northern rockfish is included in the "aggregated rockfish" category and the MRA ranges for aggregated rockfish range from 5 percent to 15 percent (Table 11, Appendix 2). The average exvessel price for northern rockfish during 2020 through 2023 was $179 per mt (Table 3-3).

Shortraker rockfish

Shortraker rockfish is currently managed as an ICA. This species is primarily harvested in Atka mackerel, arrowtooth flounder, and flathead sole target fisheries (Table 3-4). The average 2020-2024 retention rate for shortraker rockfish was 80 percent (Table 3-3). The MRA for shortraker rockfish is included in the "aggregated rockfish" category and the MRA ranges for aggregated rockfish range from 5 percent to 15 percent (Table 11, Appendix 2). The average exvessel price for shortraker rockfish during 2020 through 2023 was $379 per mt (Table 3-3).

Rougheye rockfish

Rougheye rockfish, like the previously discussed northern rockfish and shortraker rockfish, are managed as an ICA. In the AI, they are primarily harvested as incidental catch in the POP trawl fishery, and to a lesser extent the Atka mackerel trawl fishery and the Pacific cod longline fishery. In the BS, rougheye rockfish are generally caught in the Pacific cod longline fishery and various bottom trawl fisheries. The average 2020-2024 retention rate for BSAI rougheye rockfish was 56 percent (Table 3-3). The MRA for rougheye rockfish is included in the "aggregated rockfish" category and the MRA for the aggregated rockfish species ranges from 5 percent to 15 percent (Table 11, Appendix 2). The average exvessel price for rougheye rockfish during 2020 through 2023 was $150 per mt (Table 3-3).

Other rockfish

Other rockfish complex consists of seven rockfish species. Shortspine thornyheads and dusky are the two most abundant species for the other rockfish complex, accounting for about 80 percent of the survey biomass and fishery catch. Data are limited for many of the species in the other rockfish complex. There is no open directed fishery for other rockfish in the BSAI, so the species complex is managed as an ICA. Other rockfish are primarily taken in the Atka mackerel fishery, rockfish fishery (primarily POP), and sablefish fishery (Table 3-4). The average 2020-2024 retention rate for other rockfish was 61 (Table 3-3). The MRA for other rockfish is included in the "aggregated rockfish" category and the MRA for the aggregated rockfish species ranges from 5 percent to 15 percent (Table 11, Appendix 2). The average exvessel price for other rockfish during 2020 through 2023 was $447 per mt (Table 3-3).

Skates

BSAI Skates are managed as a single complex with a skates-specific ABC and OFL and are managed as an ICA. Currently skates are taken only as bycatch in other fisheries in the BSAI, so catch of skates are more dependent on the distribution and limitations placed on open directed fisheries than on any catch limit established for skates. Most of the incident catch is in the hook and line (HAL) C/P fishery for Pacific cod, and in the trawl yellowfin sole, pollock, and flathead sole fisheries for trawl vessels (Table 3-4). The average 2020-2024 retention rate for BSAI skates was 47 percent (Table 3-3). The MRA for skates is included in the "other species" category and the MRA for the other species is 20 percent for all basis species except arrowtooth flounder and Kamchatka flounder at 3 percent (Table 11, Appendix 2). The average exvessel price for BSAI skates during 2020 through 2023 was $56 per mt (Table 3-3), while the exvessel price for HAL C/P skates was $281 per mt (Table 3-20).

Sharks

Shark species are managed as a single complex and are managed as an ICA. Since there is currently no open directed fishery for sharks, all of the historical catch is composed of incidental catch. Pacific sleeper shark is the primary shark species caught in the BSAI, particularly in the pollock fishery. The average 2020-2024 retention rate for sharks was 7 percent (Table 3-3). The MRA for sharks, which is aggregated with the other species complex, is 20 percent for most basis species, but is 3 percent for arrowtooth flounder and Kamchatka flounder. The 2023 exvessel price for sharks was $1 per mt (Table 3-3).

Octopus

Octopus species are managed as a single complex. The species composition of the octopus community is not well documented, but recent research indicates that the giant Pacific octopus is most abundant in shelf waters and predominates in commercial catch. Octopus is not open for a directed fishery. Octopus are taken as incidental catch in trawl, longline, and pot fisheries throughout the BSAI; the highest catch rates are from Pacific cod pot fisheries in the three statistical areas around Unimak Pass. The average 2020-2024 retention rate for octopus was 30 percent (Table 3-3). The MRA for octopus, which is aggregated with the other species complex, is 20 percent for most basis species, but is 3 percent for arrowtooth flounder and Kamchatka flounder. The 2023 exvessel price for octopus was $255 per mt (Table 3-3).

3.3.2 Gulf of Alaska

Pollock

The GOA pollock fishery is managed through permits and limited entry. The TAC is apportioned between two seasons in the Central and Western GOA beginning January 20 and September 1with 50 percent of the total TAC allocated to each season. The directed fishery is entirely a trawl fishery. Nearly all GOA pollock was caught in the pollock directed fishery, but other fisheries also caught pollock which include rockfish, arrowtooth flounder, and Pacific cod (Table 3-6). The average retention rate for pollock during the 2020 through 2024 period was 99 percent (Table 3-3). The MRA for pollock as an incidental catch species is 20 percent for nearly all basis species (Table 10, Appendix 2). The average pollock exvessel price during the 2020 through 2023 period was $237 per mt (Table 3-3).

Pacific cod

Pacific cod was apportioned by inshore and offshore components prior to 2012. Since 2012, Western and Central GOA Pacific cod TAC was apportioned amongst gear and operation types. Within the Western and Central GOA, 60 percent of each component's portion of the TAC is allocated to the A season (January 1 through June 10) and the remainder is allocated to the B season (June 10 through December

31, although the B season directed fishery for non-jig gear does not open until September 1). Pacific cod is the second major species (after pollock) targeted in the commercial groundfish fisheries in the GOA. Pacific cod are also caught as incidental catch in the arrowtooth flounder, shallow-water flatfish, and the rockfish fisheries (Table 3-6). The MRA for Pacific cod as incidental catch species is 20 percent for nearly all basis species (Table 10, Appendix 2). The average retained catch rate during 2020 through 2024 was 94 percent (Table 3-3). The average Pacific cod exvessel price during the 2020 through 2023 period was $577 per mt (Table 3-3).

Sablefish

In the GOA, the sablefish directed fishery is prosecuted through an IFQ program. The majority of sablefish caught was in the directed IFQ fishery. Sablefish are also taken by trawl gear incidental to the directed fisheries for arrowtooth flounder and pollock fisheries (Table 3-6). The average retention rate of sablefish during 2020 through 2024 was 94 percent (Table 3-3). The MRA for sablefish is 7 percent for rockfish and flatfish basis species and 1 percent of all other basis species (Table 10, Appendix 2). The average sablefish exvessel price from 2020 through 2023 was $3,952 per mt (Table 3-3).

Shallow-water flatfish

The shallow-water flatfish species group is comprised of northern rock sole, southern rock sole, yellowfin sole, butter sole, starry flounder, English sole, sand sole, and Alaska plaice. Shallow-water flatfish are generally harvested with trawl gear. Southern and northern rock sole are the predominant target species in the group. Of the shallow-water flatfish during 2020 through 2024, most were caught in the directed fishery, but the arrowtooth flounder fishery and the pollock fishery also caught shallow-water flatfish (Table 3-6). The MRA for shallow-water flatfish is 20 percent for all basis species (Table 10, Appendix 2). The average retention rate of shallow-water flatfish was 77 percent (Table 3-3). The average shallow-water flatfish exvessel price during 2020 through 2023 was $148 per mt (Table 3-3).

Deep-water flatfish

The deep-water flatfish species group is composed of Dover sole, Greenland turbot, Kamchatka flounder, and deep-sea sole. Dover sole constitutes the majority of the fishery catch in the deep-water flatfish species group. Deep-water flatfish are primarily caught in the directed arrowtooth flounder fishery (Table 3-6). Fishing seasons are driven by seasonal halibut prohibited species catch (PSC) apportionments, with fishing occurring primarily in April and May because of higher catch rates and better prices. The MRA for deep-water flatfish is 20 percent for all basis species. The average percent retained of deep-water flatfish during 2020 through 2024 was 31 percent (Table 3-3). The average exvessel price for deep-water flatfish was $20 per mt (Table 3-3).

Rex sole

GOA rex sole are caught using trawl gear in a directed fishery and fisheries targeting other bottom dwelling species such as Pacific ocean perch and arrowtooth flounder fisheries. Fishing seasons are dictated by seasonal halibut PSC apportionments, with approximately 7 months of fishing occurring between January and November. Catches of rex sole occur primarily in the Western and Central GOA. The MRA for rex sole is 20 percent for all basis species. From 2020 through 2024, the average percent of rex sole retained was 93 percent The average exvessel price for rex sole price was $253 per mt.

Arrowtooth flounder

The directed fishery for arrowtooth flounder takes place throughout the GOA but is primarily in the Central GOA (NMFS area 630). Arrowtooth flounder are typically caught with bottom trawl gear.

Outside of the directed fishery, they are primarily caught as incidental catch in the sablefish, rockfish, pollock, and shallow-water flatfish fisheries (Table 3-6). The MRA for arrowtooth flounder is 35 percent for all basis species (Table 10, Appendix 2). The average percent of retained arrowtooth flounder from 2020 through 2024 was 91 percent (Table 3-3). The average exvessel prices for arrowtooth flounder during the 2020 through 2023 period was $72 per mt (Table 3-3).

Flathead sole

Flathead sole in the GOA during the 2020 through 2024 period was primarily caught in the arrowtooth flounder, rockfish, and shallow-water flatfish target fisheries (Table 3-6). Fishing seasons are driven by seasonal halibut PSC apportionments, with approximately 7 months of fishing occurring between January and November. The MRA for flathead sole is 20 percent for all basis species (Table 10, Appendix 2). The average retention rate for flathead sole during the 2020 through 2024 period was 90 percent. The average exvessel price for flathead sole from 2020 through 2023 was $123 per mt (Table 3-3).

Pacific ocean perch, northern rockfish and dusky rockfish

Pacific ocean perch (POP), northern rockfish, and dusky rockfish are caught primarily in the Central GOA through the Central GOA Rockfish Program. First implemented under the Rockfish Pilot Program from 2007 through 2011, the Central GOA Rockfish Program was implemented in 2012. The program, like its predecessor, allocates exclusive harvest privileges to a specific group of license limitation program license holders who use trawl gear to target POP, dusky rockfish, and northern rockfish. Other fisheries that catch these rockfish include arrowtooth flounder and pollock (Table 3-6). The MRA for these rockfish species, all of which are included in the aggregated rockfish category, is generally 15 percent for most basis species, but is 5 percent for some basis species (Table 10, Appendix 2). The retention rate for all three of these rockfish species is generally 98 percent for vessels using trawl gear (Table 3-3). The average exvessel price for POP, northern rockfish, and dusky rockfish from 2020 through 2023 was $246 per mt, $217 per mt, and $259 per mt, respectively (Table 3-3). Note, this is during the directed fishery, when harvested as incidental to pollock, these species have low value as they to go to meal.

Shortraker rockfish

Shortraker rockfish in the GOA are managed as “bycatch” only species, except for trawl C/Ps in the Central GOA Rockfish Program. Shortraker rockfish have been taken in both longline and trawl fisheries and mostly in sablefish target fishery, with less amounts taken in the rockfish and pollock fisheries (Table 3-6). Nearly all the longline catch of shortraker rockfish appears to be “true” incidental catch in the sablefish and halibut longline fisheries. In the trawl rockfish fisheries, however, some of the shortraker is taken by actual targeting during topping off. Such instances of “topping off” for shortraker rockfish appear to take place in the POP trawl fishery, especially because shortraker rockfish is the most valuable trawl-caught rockfish species in terms of landed price. Starting in 2007 with the Central GOA Rockfish Pilot Program and continuing in the new Central GOA Rockfish Program that was implemented in 2012, shortraker rockfish, an allocated secondary species, catch in the Central GOA by trawl vessels has decreased considerably. The MRA for this shortraker rockfish, which is included in the aggregated rockfish category, is generally 15 percent for most basis species, but is 5 percent for some basis species (Table 10, Appendix 2). The average retention rate of shortraker rockfish during 2020 through 2024 was 77 percent (Table 3-3). The average exvessel price for shortraker rockfish from 2020 through 2023 was $341 per mt (Table 3-3).

Rougheye rockfish

Rougheye rockfish have been managed as "bycatch"-only species since the creation of the shortraker/rougheye rockfish management subgroup in the GOA in 1991. Nearly all of the rougheye rockfish were from the sablefish and rockfish directed fisheries (Table 3-6). The MRA for rougheye rockfish, which is included in the aggregated rockfish category, is generally 15 percent for most basis species, but is 5 percent for some basis species (Table 10, Appendix 2). As noted in Table 3-3, during 2020 through 2024, the average retention rate was 86 percent (Table 3-3). The 2020 through 2023 average exvessel price for rougheye rockfish was $331 per mt (Table 3-3).

Demersal shelf rockfish

Demersal shelf rockfish (DSR) are managed jointly by Alaska Department of Fish and Game and NMFS. The directed fishery for DSR is almost entirely prosecuted by longline gear in the Southeast outside area. Outside of the directed fishery in the Southeast Outside, DSR is managed in the "other rockfish" species group as "bycatch" only species. Incidental catch of DSR are caught in the lingcod, Pacific cod, halibut, and sablefish fisheries. The MRA for DSR, which is included in the aggregated rockfish category, is generally 15 percent for most basis species, but is 5 percent for some basis species (Table 10, Appendix 2). As noted in Table 3-3, during 2020 through 2024, the average retention rate for DSR was 94 percent (Table 3-3). The 2020 through 2023 average exvessel price for DSR was $1,699 per mt (Table 3-3).

Thornyhead rockfish

Thornyhead rockfish are managed as "bycatch"-only status in the GOA. They are commonly taken by bottom trawls while targeting rockfish and sablefish directed fisheries and longline gear while targeting sablefish. Thornyhead rockfish are a secondary species that has an allocation of quota share which can be caught while fishing for the primary rockfish species in the Central GOA Rockfish Program. Thornyhead rockfish also have a retention rate of 92 percent (Table 3-3). The MRA for thornyhead rockfish, which is included in the aggregated rockfish category, is generally 15 percent for most basis species, but is 5 percent for some basis species (Table 10, Appendix 2). The average exvessel price for thornyhead rockfish during 2020 through 2023 was $1,133 per mt (Table 3-3).

Other rockfish

Since the mid-1990s, directed fishing has not been allowed for "other rockfish" in the GOA, and the fish can only be retained as "incidentally-caught" species. Average retention of other rockfish during 2020 through 2024 was 62 percent (Table 3-3). The MRA for other rockfish, which is included in the aggregated rockfish category, is generally 15 percent for most basis species, but is 5 percent for some basis species (Table 10, Appendix 2). The average exvessel price for other rockfish was $127 per mt (Table 3-3).

Atka mackerel

Atka mackerel has been managed as a "bycatch"-only fishery since 1996. As indicated in Table 3-6, during 2020 through 2024 nearly all of the Atka mackerel incidental catch in the GOA occurred in the rockfish directed fisheries. Under the Central GOA Rockfish Program, catcher processors who historically would move out of area 610 after the POP fishery closed, are now remaining in the area and targeting northern and pelagic shelf rockfish. This is contributing to greater catches of Atka mackerel (Table 3-8). Average retention of Atka mackerel during the 2020 through 2024 period was 92 percent (Table 3-3). The MRA for Atka mackerel is 20 percent for all basis species (Table 10, Appendix 2). The 2020 through 2023 average exvessel price for Atka mackerel was $463 per mt (Table 3-3).

GOA Skate complex

The GOA Skate complex is comprised of at least 15 skate species. Big skates and longnose skates dominate the skate biomass in the GOA. Until 2003, skates were primarily caught as incidental catch in longline and trawl fisheries targeting Pacific halibut and other groundfish. In 2003, vessels began retaining and delivering skates as a target species in federal waters partly because the market for skates had improved and partly because catch of Pacific cod could be retained as incidental catch in a skate target fishery, even though directed fishing for Pacific cod was seasonally closed. Starting in 2005 and continuing today, skates are managed as "bycatch" only. As noted in Table 3-6, the primary fisheries that land big skates as incidental is the arrowtooth flounder fishery. Bycatch of longnose skate is primarily from the sablefish fishery. For other skates, the largest portion of incidental catch comes from the sablefish fishery. As noted in Table 3-3, retention of skates varies depending on species. The average retention of big skates from 2020 through 2024 was 54 percent. The MRA for skates is 5 percent for all basis species (Table 10, Appendix 2. For longnose skates, the average retention rate was 30 percent, and for other skates, the average retention was 13 percent. The 2020 through 2023 exvessel price for big nose skates, longnose skates and other skates was $378 per mt, $205 per mt, and $12 per mt, respectively (Table 3-3).

Sharks

GOA shark species are currently not open for directed fishing. Historical catches of sharks in the GOA are composed entirely of incidental catch (mostly in the sablefish fishery), and nearly all shark catch is discarded (average discard rate is 97 percent). The MRA for sharks, which is aggregated with the other species complex, is 20 percent for all basis species (Table 10, Appendix 2). The 2020 through 2023 average shark exvessel price was $1 per mt (Table 3-3).

Octopus

GOA octopus is currently not open for directed fishing. Octopuses are caught incidentally throughout the GOA in both state and federally-managed bottom trawl, longline, and pot fisheries. The majority of incidental catch of octopus comes from the Pacific cod fishery (Table 3-6). The MRA for octopus, which is aggregated with the other species complex, is 20 percent for all basis species (Table 10, Appendix 2). The 2020 through 2023 average octopus exvessel price was $367 per mt (Table 3-3).

Table 3-1 ABC, OFL, TAC, Initial TAC (ITAC), and CDQ amounts for BSAI groundfish species from 2020 through 2024

		2020					2021					2022				
Species	Area	OFL	ABC	TAC	iTAC	CDQ	OFL	ABC	TAC	iTAC	CDQ	OFL	ABC	TAC	iTAC	CDQ
Pollock	BS	4,085,000	2,043,000	1,425,000	1,282,500	142,500	2,594,000	1,626,000	1,375,000	1,237,500	137,500	1,469,000	1,111,000	1,111,000	999,900	111,100
	AI	66,973	55,120	19,000	17,100	1,900	61,856	51,241	19,000	17,100	1,900	61,264	50,752	19,000	17,100	1,900
	Bogslof	183,080	137,310	75	75	0	113,479	85,109	250	250	0	113,479	85,109	250	250	0
Pacific cod	BS	191,386	155,873	141,799	126,627	15,172	147,949	123,805	111,380	99,462	11,918	183,012	153,383	136,466	121,864	14,602
	AI	27,400	20,600	13,796	12,320	1,476	27,400	20,600	13,796	12,320	1,476	27,400	20,600	13,796	12,320	1,476
Sablefish	Alaska Total	50,481	n/a	n/a	n/a	n/a	60,426	29,588	n/a	n/a	n/a	40,432	34,521	n/a	n/a	n/a
	BS	n/a	2,174	1,861	1,535	256	n/a	3,396	3,396	2,802	467	n/a	5,264	5,264	4,343	724
	AI	n/a	2,952	2,039	1,657	344	n/a	4,717	4,717	3,833	796	n/a	6,463	6,463	5,251	1,091
Yellowfin Sole	BSAI	287,307	260,918	150,700	134,575	16,125	341,571	313,477	200,000	178,600	21,400	377,071	354,014	250,000	223,250	26,750
Greenland Turbot	BSAI	11,319	9,625	5,300	4,505	n/a	8,568	7,326	6,025	5,121	n/a	7,687	6,572	6,572	5,586	n/a
	BS	n/a	8,403	5,125	4,356	548	n/a	6,176	5,125	4,356	548	n/a	5,540	5,540	4,709	593
	AI	n/a	1,222	175	149	0	n/a	1,150	900	765	0	n/a	1,032	1,032	877	0
Arrowtooth Flounder	BSAI	84,057	71,618	10,000	8,500	1,070	90,873	77,349	15,000	12,750	1,605	94,445	80,389	20,000	17,000	2,140
Kamchatka Flounder	BSAI	11,495	9,708	6,800	5,780	0	10,630	8,982	8,982	7,635	0	10,903	9,214	9,214	7,832	0
Rock Sole	BSAI	157,300	153,300	47,100	42,060	5,040	145,180	140,306	54,500	48,669	5,832	214,084	206,896	66,000	58,938	7,062
Flathead Sole	BSAI	82,810	68,134	19,500	17,414	2,087	75,863	62,567	25,000	22,325	2,675	77,967	64,288	35,500	31,702	3,799
Alaska Plaice	BSAI	37,600	31,600	17,000	14,450	0	37,924	31,657	24,500	20,825	0	39,305	32,697	29,221	24,838	0
Other Flatfish	BSAI	21,824	16,368	4,000	3,400	0	22,919	17,189	6,500	5,525	0	22,919	17,189	10,000	8,500	0
Pacific Ocean Perch	BSAI	58,956	48,846	42,875	37,678	n/a	44,376	37,173	35,899	31,594	n/a	42,605	35,688	35,385	31,154	n/a
	BS	n/a	14,168	14,168	12,043	0	n/a	10,782	10,782	9,165	0	n/a	10,352	10,352	8,799	0
	EAI	n/a	11,063	10,613	9,477	1,136	n/a	8,419	8,419	7,518	901	n/a	8,083	8,083	7,218	865
	CAI	n/a	8,144	8,094	7,228	866	n/a	6,198	6,198	5,535	663	n/a	5,950	5,950	5,313	637
	WAI	n/a	15,471	10,000	8,930	1,070	n/a	11,774	10,500	9,377	1,124	n/a	11,303	11,000	9,823	1,177
Northern Rockfish	BSAI	19,751	16,243	10,000	8,500	0	18,917	15,557	13,000	11,050	0	23,420	19,217	17,000	14,450	0
Blackspotted/Rougheye Rockfish	BSAI	861	708	349	297	0	576	482	482	410	0	598	503	503	428	0
	BS/EAI	n/a	444	85	72	0	n/a	313	313	266	0	n/a	326	326	277	0
	CAI/WAI	n/a	264	264	224	0	n/a	169	169	144	0	n/a	177	177	150	0
Shortraker Rockfish	BSAI	722	541	375	319	0	722	541	500	425	0	722	541	541	460	0
Other Rockfish	BSAI	1,793	1,344	1,088	925	0	1,751	1,313	916	779	0	1,751	1,313	1,144	972	0
	BS	n/a	956	700	595	0	n/a	919	522	444	0	n/a	919	750	638	0
	AI	n/a	388	388	330	0	n/a	394	394	335	0	n/a	394	394	335	0
Atka Mackerel	BSAI	81,200	70,100	59,305	52,959	6,346	85,580	73,590	62,257	55,596	6,661	91,870	78,510	66,481	59,368	7,113
	EAI/BS	n/a	24,535	24,535	21,910	2,625	n/a	25,760	25,760	23,004	2,756	n/a	27,260	27,260	24,343	2,917
	CAI	n/a	14,721	14,721	13,146	1,575	n/a	15,450	15,450	13,797	1,653	n/a	16,880	16,880	15,074	1,806
	WAI	n/a	30,844	20,049	17,904	2,145	n/a	32,380	21,047	18,795	2,252	n/a	34,370	22,341	19,951	2,390
Skates	BSAI	49,792	41,543	16,313	13,866	0	49,297	41,257	18,000	15,300	0	47,790	39,958	30,000	25,500	0
Sculpins	BSAI	67,817	50,863	5,300	4,505	0										
Sharks	BSAI	689	517	150	128	0	689	517	200	170	0	689	517	500	425	0
Octopuses	BSAI	4,769	3,576	275	234	0	4,769	3,576	700	595	0	4,769	3,576	700	595	0
Total		**5,584,382**	**3,272,581**	**2,000,000**	**1,791,907**	**195,935**	**3,945,315**	**2,747,727**	**2,000,000**	**1,790,634**	**195,466**	**2,953,182**	**2,383,653**	**1,871,000**	**1,672,024**	**181,028**

Source: NMFS

Table 3-1 ABC, OFL, TAC, ITAC, and CDQ amounts for BSAI groundfish species from 2020 through 2024 (continued)

		2023					2024				
Species	Area	OFL	ABC	TAC	iTAC	CDQ	OFL	ABC	TAC	iTAC	CDQ
Pollock	BS	3,381,000	1,910,000	1,300,000	1,170,000	130,000	3,162,000	2,313,000	1,300,000	1,170,000	130,000
	AI	52,383	43,413	19,000	17,100	1,900	51,516	42,654	19,000	17,100	1,900
	Bogslof	115,146	86,360	300	300	0	115,146	86,360	250	250	0
Pacific cod	BS	172,495	144,834	127,409	113,776	13,633	200,995	167,952	147,753	131,943	15,810
	AI	18,416	13,812	8,425	7,524	901	18,416	12,431	8,080	7,215	865
Sablefish	Alaska Total	47,390	40,502	n/a	n/a	n/a	55,084	47,146	n/a	n/a	n/a
	BS	n/a	8,417	7,996	6,597	1,099	n/a	11,450	7,996	6,597	1,099
	AI	n/a	8,884	8,440	6,858	1,424	n/a	13,100	8,440	6,858	1,424
Yellowfin Sole	BSAI	404,882	378,499	230,000	205,390	24,610	305,298	265,913	195,000	174,135	20,865
Greenland Turbot	BSAI	4,645	3,960	3,960	3,366	n/a	3,705	3,188	3,188	2,710	n/a
	BS	n/a	3,338	3,338	2,837	357	n/a	2,687	2,687	2,284	288
	AI	n/a	622	622	529	0	n/a	501	501	426	0
Arrowtooth Flounder	BSAI	98,787	83,852	15,000	12,750	1,605	103,280	87,690	14,000	11,900	1,498
Kamchatka Flounder	BSAI	8,946	7,579	7,579	6,442	0	8,850	7,498	7,498	6,373	0
Rock Sole	BSAI	166,034	121,719	66,000	58,938	7,062	197,828	122,091	66,000	58,938	7,062
Flathead Sole	BSAI	79,256	65,344	35,500	31,702	3,799	81,605	67,289	35,500	31,702	3,799
Alaska Plaice	BSAI	40,823	33,946	17,500	14,875	0	42,695	35,494	21,752	18,489	0
Other Flatfish	BSAI	22,919	17,189	4,500	3,825	0	22,919	17,189	4,500	3,825	0
Pacific Ocean Perch	BSAI	50,133	42,038	37,703	33,157	n/a	49,010	41,096	37,626	33,100	n/a
	BS	n/a	11,903	11,903	10,118	0	n/a	11,636	11,636	9,891	0
	EAI	n/a	8,152	8,152	7,280	872	n/a	7,969	7,969	7,116	852.683
	CAI	n/a	5,648	5,648	5,044	604	n/a	5,521	5,521	4,930	590.747
	WAI	n/a	16,335	12,000	10,716	1,284	n/a	15,970	12,500	11,163	1,338
Northern Rockfish	BSAI	22,776	18,687	11,000	9,350	0	23,556	19,274	16,752	14,239	0
Blackspotted/Rougheye Rockfish	BSAI	703	525	525	446	0	761	569	569	483.65	0
	BS/EAI	n/a	359	359	305	0	n/a	388	388	329.8	0
	CAI/WAI	n/a	166	166	141	0	n/a	181	181	153.85	0
Shortraker Rockfish	BSAI	706	530	530	451	0	706	530	530	450.5	0
Other Rockfish	BSAI	1,680	1,260	1,260	1,071	0	1,680	1,260	1,260	1,071	0
	BS	n/a	880	880	748	0	n/a	880	880	748	0
	AI	n/a	380	380	323	0	n/a	380	380	323	0
Atka Mackerel	BSAI	118,787	98,588	69,282	61,869	7,413	111,684	95,358	72,987	65,177	7,810
	EAI/BS	n/a	43,281	27,260	24,343	2,917	n/a	41,723	32,260	28,808	3,452
	CAI	n/a	17,351	17,351	15,494	1,857	n/a	16,754	16,754	14,961	1,793
	WAI	n/a	37,956	24,671	22,031	2,640	n/a	36,882	23,973	21,408	2,565
Skates	BSAI	46,220	38,605	27,441	23,325	0	45,574	37,808	30,519	25,941	0
Sculpins	BSAI										
Sharks	BSAI	689	450	250	213	0	689	450	400	340	0
Octopuses	BSAI	4,769	3,576	400	340	0	6,080	4,560	400	340	0
Total		**4,859,585**	**3,155,268**	**2,000,000**	**1,789,662**	**196,564**	**4,609,077**	**3,476,800**	**2,000,000**	**1,789,177**	**195,199**

Source: NMFS

Table 3-2 ABC, OFL, TAC, ITAC, and CDQ amounts for GOA groundfish species from 2020 through 2024

		2020			2021			2022			2023			2024		
Species	Area	OFL	ABC	TAC	OFL	ABC	TAC	OFL	ABC	TAC	OFL	ABC	TAC	OFL	ABC	TAC
Pollock	Shumagin (610)	n/a	19,175	19,175	n/a	18,477	18,477	n/a	23,714	23,714	n/a	26,958	26,958	n/a	38,882	38,882
	Chirikof (620)	n/a	54,456	54,456	n/a	54,870	54,870	n/a	69,250	69,250	n/a	77,005	77,005	n/a	90,937	90,937
	Kodiak (630)	n/a	26,597	26,597	n/a	24,320	24,320	n/a	30,068	30,068	n/a	33,729	33,729	n/a	50,587	50,587
	WYK (640)	n/a	5,554	5,554	n/a	5,412	5,412	n/a	6,722	6,722	n/a	7,523	7,523	n/a	5,565	5,565
	W/C/WYK (subtotal)	140,674	108,494*	105,782	123,455	105,722*	103,079	154,983	133,081*	129,754	173,470	148,938*	145,215	269,916	190740*	185,971
	SEO (650)	13,531	10,148	10,148	13,531	10,148	10,148	15,150	11,363	11,363	15,150	11,363	11,363	12,998	9,749	9,749
	Total	**154,205**	**118,642**	**115,930**	**136,986**	**115,870**	**113,227**	**170,133**	**144,444**	**141,117**	**188,620**	**160,301**	**156,578**	**282,914**	**200,489**	**195,720**
Pacific cod	W	n/a	4,942	2,076	n/a	7,986	5,590	n/a	9,942	6,959	n/a	7,464	5,225	n/a	8,745	6,121
	C	n/a	8,458	3,806	n/a	13,656	10,242	n/a	19,752	14,814	n/a	14,830	11,123	n/a	20,590	15,442
	E	n/a	1,221	549	n/a	1,985	1,489	n/a	3,117	2,338	n/a	2,340	1,755	n/a	2,937	2,203
	Total	**17,794**	**14,621**	**6,431**	**28,977**	**23,627**	**17,321**	**39,555**	**32,811**	**24,111**	**29,737**	**24,634**	**18,103**	**38,712**	**32,272**	**23,766**
Sablefish	W	n/a	2,278	1,942	n/a	3,224	2,428	n/a	3,727	3,727	n/a	4,473	4,473	n/a	4,699	4,699
	C	n/a	7,560	6,445	n/a	9,527	8,056	n/a	9,965	9,965	n/a	9,921	9,921	n/a	9,651	9,651
	WYK	n/a	2,521	2,343	n/a	3,451	2,929	n/a	3,437	3,437	n/a	3,205	3,205	n/a	2,926	2,926
	SEO	n/a	4,524	3,663	n/a	5,273	4,579	n/a	5,665	5,665	n/a	5,602	5,602	n/a	5,320	5,320
	E (WYK and SEO subtotal)	n/a	7,045	6,006	n/a	8,724	7,508	n/a	9,102	9,102	n/a	8,807	8,807			
	Total	**50,481*****	**16,883**	**14,393**	**60,426*****	**21,475**	**17,991**	**40,432*****	**22,794**	**22,794**	**47,390*****	**23,201**	**23,201**	**55,084****	**47146****	**22,596**
Shallow-water Flatfish	W	n/a	23,849	13,250	n/a	24,151	13,250	n/a	21,256	13,250	n/a	22,485	13,250	n/a	23,337	13,250
	C	n/a	27,732	27,732	n/a	28,082	28,082	n/a	25,305	25,305	n/a	26,769	26,769	n/a	27,783	27,783
	WYK	n/a	2,773	2,773	n/a	2,808	2,808	n/a	2,531	2,531	n/a	2,677	2,677	n/a	2,778	2,778
	SEO	n/a	1,109	1,109	n/a	1,123	1,123	n/a	1,518	1,518	n/a	1,606	1,606	n/a	1,667	1,667
	Total	**68,010**	**55,463**	**44,864**	**68,841**	**56,164**	**45,263**	**62,273**	**50,610**	**42,604**	**65,736**	**53,537**	**44,302**	**68,121**	**55,565**	**45,478**
Deep-water Flatfish	W	n/a	226	226	n/a	225	225	n/a	256	256	n/a	256	256	n/a	237	237
	C	n/a	1,948	1,948	n/a	1,914	1,914	n/a	2,139	2,139	n/a	2,105	2,105	n/a	2,655	2,655
	WYK	n/a	2,105	2,105	n/a	2,068	2,068	n/a	1,431	1,431	n/a	1,407	1,407	n/a	1,856	1,856
	SEO	n/a	1,751	1,751	n/a	1,719	1,719	n/a	2,082	2,082	n/a	2,048	2,048	n/a	2,314	2,314
	Total	**7,163**	**6,030**	**6,030**	**7,040**	**5,926**	**5,926**	**7,026**	**5,908**	**5,908**	**6,918**	**5,816**	**5,816**	**8,387**	**7,062**	**7,062**
Rex Sole	W	n/a	2,901	2,901	n/a	3,013	3,013	n/a	2,981	2,981	n/a	3,236	3,236	n/a	3,367	3,367
	C	n/a	8,579	8,579	n/a	8,912	8,912	n/a	12,076	12,076	n/a	13,110	13,110	n/a	13,639	13,639
	WYK	n/a	1,174	1,174	n/a	1,206	1,206	n/a	1,361	1,361	n/a	1,439	1,439	n/a	1,453	1,453
	SEO	n/a	2,224	2,224	n/a	2,285	2,285	n/a	2,723	2,723	n/a	2,879	2,879	n/a	2,905	2,905
	Total	**18,127**	**14,878**	**14,878**	**18,779**	**15,416**	**15,416**	**23,302**	**19,141**	**19,141**	**2 5,135**	**20,664**	**20,664**	**25,978**	**21,364**	**21,364**
Arrowtooth Flounder	W	n/a	31,455	14,500	n/a	32,377	14,500	n/a	33,658	14,500	n/a	30,469	14,500	n/a	30,409	14,500
	C	n/a	68,669	68,669	n/a	69,072	69,072	n/a	68,394	68,394	n/a	65,000	65,000	n/a	64,871	64,871
	WYK	n/a	10,242	6,900	n/a	8,380	6,900	n/a	6,707	6,707	n/a	7,886	7,886	n/a	7,870	7,870
	SEO	n/a	17,694	6,900	n/a	17,141	6,900	n/a	11,020	6,900	n/a	16,130	6,900	n/a	16,099	6,900
	Total	**153,017**	**128,060**	**96,969**	**151,723**	**126,970**	**97,372**	**143,100**	**119,779**	**96,501**	**142,749**	**119,485**	**94,286**	**142,485**	**119,249**	**94,141**
Flathead Sole	W	n/a	13,783	8,650	n/a	14,209	8,650	n/a	14,755	8,650	n/a	12,793	8,650	n/a	13,273	8,650
	C	n/a	20,201	15,400	n/a	20,826	15,400	n/a	22,033	15,400	n/a	21,487	21,487	n/a	21,307	21,307
	WYK	n/a	2,354	2,354	n/a	2,427	2,427	n/a	1,511	1,511	n/a	2,320	2,320	n/a	3,876	3,876
	SEO	n/a	1,858	1,858	n/a	1,915	1,915	n/a	1,876	1,876	n/a	2,880	2,880	n/a	2,047	2,047
	Total	**46,572**	**38,196**	**28,262**	**47,982**	**39,377**	**28,392**	**48,928**	**40,175**	**27,437**	**48,161**	**39,480**	**35,337**	**49,414**	**40,503**	**35,880**

Source: NMFS

*2.5 percent of the pollock ABC w ent to the State's pollock GHL fishery.

**The 1 mt of ABC to the WYK District of the EGA has been included in the "other rockfish" species group.

***Sablefish OFL is Alaska w ide

Note: Sculpin w as moved into the ecosystem component starting in

Table 3-2 ABC, OFL, TAC, ITAC, and CDQ amounts for GOA groundfish species from 2020 through 2023 (continued)

		2020			2021			2022			2023			2024		
Species	Area	OFL	ABC	TAC	OFL	ABC	TAC	OFL	ABC	TAC	OFL	ABC	TAC	OFL	ABC	TAC
Pacific Ocean Perch	W	n/a	1,437	1,437	n/a	1,643	1,643	n/a	2,602	2,602	n/a	2,529	2,529	n/a	1,787	1,787
	C	n/a	23,678	23,678	n/a	27,429	27,429	n/a	30,806	30,806	n/a	29,940	29,940	n/a	28,757	28,757
	WYK	n/a	1,470	1,470	n/a	1,705	1,705	n/a	1,409	1,409	n/a	1,370	1,370	n/a	2,110	2,110
	W/C/WYK	31,567	26,585	26,585	36,563	30,777	30,777	41,470	34,817	34,817	40,308	33,839	33,839			
	SEO	5,525	4,653	4,653	6,414	5,400	5,400	4,110	3,451	3,451	3,994	3,354	3,354	n/a	7,065	7,065
	Total	**37,092**	**31,238**	**31,238**	**42,977**	**36,177**	**36,177**	**45,580**	**38,268**	**38,268**	**44,302**	**37,193**	**37,193**	**47,466**	**39,719**	**39,719**
Northern Rockfish	W	n/a	1,133	1,133	n/a	2,023	2,023	n/a	1,944	1,944	n/a	2,614	2,614	n/a	2,535	2,535
	C	n/a	3,178	3,178	n/a	3,334	3,334	n/a	3,202	3,202	n/a	2,350	2,350	n/a	2,280	2,280
	E	n/a	1**	0	n/a	1**	n/a	n/a	1**	n/a	n/a	1**	n/a	n/a	n/a***	n/a
	Total	**5,143**	**4,312**	**4,311**	**6,396**	**5,358**	**5,357**	**6,143**	**5,146**	**5,146**	**5,927**	**4,964**	**4,964**	**5,750**	**4,815**	**4,815**
Shortraker Rockfish	W	n/a	52	52	n/a	52	52	n/a	51	51	n/a	51	51	n/a	34	34
	C	n/a	284	284	n/a	284	284	n/a	280	280	n/a	280	280	n/a	189	189
	E	n/a	372	372	n/a	372	372	n/a	374	374	n/a	374	374	n/a	424	424
	Total	**944**	**708**	**708**	**944**	**708**	**708**	**940**	**705**	**705**	**940**	**705**	**705**	**863**	**647**	**647**
Dusky Rockfish (pelagic shelf rockfish)	W	n/a	776	776	n/a	270	270	n/a	269	269	n/a	149	149	n/a	145	145
	C	n/a	2,746	2,746	n/a	4,548	4,548	n/a	4,534	4,534	n/a	7,647	7,647	n/a	7,365	7,365
	WYK	n/a	115	115	n/a	468	468	n/a	427	427	n/a	90	90	n/a	84	84
	SEO	n/a	39	39	n/a	103	103	n/a	142	142	n/a	31	31	n/a	30	30
	Total	**4,492**	**3,676**	**3,676**	**8,655**	**5,389**	**5,389**	**8,614**	**5,372**	**5,372**	**9,638**	**7,917**	**7,917**	**9,281**	**7,624**	**7,624**
Rougheye and Blackspotted Rockfish	W	n/a	168	168	n/a	168	168	n/a	184	184	n/a	180	180	n/a	197	197
	C	n/a	455	455	n/a	456	456	n/a	235	235	n/a	232	232	n/a	315	315
	E	n/a	586	586	n/a	588	588	n/a	369	369	n/a	363	363	n/a	525	525
	Total	**1,452**	**1,209**	**1,209**	**1,456**	**1,212**	**1,212**	**947**	**788**	**788**	**930**	**775**	**775**	**1,555**	**1,037**	**1,037**
Demersal Shelf Rockfish	SEO	375	238	238	405	257	257	579	365	365	376	283	283	376	283	283
Thornyhead Rockfish	W	n/a	326	326	n/a	352	352	n/a	352	352	n/a	314	314	n/a	314	314
	C	n/a	911	911	n/a	910	910	n/a	910	910	n/a	693	693	n/a	693	693
	E	n/a	779	779	n/a	691	691	n/a	691	691	n/a	621	621	n/a	621	621
	Total (GW)	**2,688**	**2,016**	**2,016**	**2,604**	**1,953**	**1,953**	**2,604**	**1,953**	**1,953**	**2,170**	**1,628**	**1,628**	**2,170**	**1,628**	**1,628**
Other Rockfish	W and C	n/a	940	940	n/a	940	940	n/a	940	940	n/a	940	940			
	WYK	n/a	369	369	n/a	369	369	n/a	370	370	n/a	370	370			
	SEO	n/a	2,744	2,744	n/a	2,744	300	n/a	2,744	300	n/a	2,744	300	n/a	2,421	300
	Total	**5,320**	**4,053**	**4,053**	**5,320**	**4,053**	**1,609**	**5,320**	**4,054**	**1,610**	**5,320**	**4,054**	**1,610**	**4,977**	**3,774**	**1,653**
Atka Mackerel	**Total (GW)**	**6,200**	**4,700**	**3,000**	**6,200**	**4,700**	**3,000**	**6,200**	**4,700**	**3,000**	**6 ,200**	**4 ,700**	**3 ,000**	**6,200**	**4,700**	**3,000**
Big Skates	W	n/a	758	758	n/a	758	758	n/a	591	591	n/a	591	591	n/a	745	745
	C	n/a	1,560	1,560	n/a	1,560	1,560	n/a	1,482	1,482	n/a	1,482	1,482	n/a	1,749	1,749
	E	n/a	890	890	n/a	890	890	n/a	794	794	n/a	794	794	n/a	341	341
	Total	**4,278**	**3,208**	**3,208**	**4,278**	**3,208**	**3,208**	**3,822**	**2,867**	**2,867**	**3,822**	**2,867**	**2,867**	**3,780**	**2,835**	**2,835**
Longnose Skates	W	n/a	158	158	n/a	158	158	n/a	151	151	n/a	151	151	n/a	104	104
	C	n/a	1,875	1,875	n/a	1,875	1,875	n/a	2,044	2,044	n/a	2,044	2,044	n/a	1,894	1,894
	E	n/a	554	554	n/a	554	554	n/a	517	517	n/a	517	517	n/a	538	538
	Total	**3,449**	**2,587**	**2,587**	**3,449**	**2,587**	**2,587**	**3,616**	**2,712**	**2,712**	**3,616**	**2,712**	**2,712**	**3,380**	**2,536**	**2,536**
Other Skates	GW	1,166	875	875	1,166	875	875	1,311	984	984	1,311	984	984	887	665	665
Sculpins	GW	6,932	5,199	5,199												
Sharks	GW	10,913	8,184	8,184	5,006	3,755	3,755	5,006	3,755	3,755	6,521	4,891	4,891	6,521	4,891	4,891
Octopus	GW	1,307	980	980	1,307	980	980	1,307	980	980	1,307	980	980	1,307	980	980
Total		**607,120**	**465,956**	**399,239**	**610,917**	**476,037**	**407,975**	**626,738**	**520,038**	**448,118**	**646,826**	**539,072**	**468,796**	**765,608**	**599,784**	**518,320**

Source: NMFS

*2.5 percent of the pollock ABC went to the State's pollock GHL fishery.

**The 1 mt of ABC to the WYK District of the EGA has been included in the "other rockfish" species group.

***Sablefish OFL is Alaska wide

Note: Sculpin was moved into the ecosystem component starting in 2021

Table 3-3 Average BSAI and GOA exvessel value ($), price ($) per mt, total incidental catch (mt), total target catch (mt), total discarded catch (mt), retained catch as a percent of total catch, and total catch (mt) from 2020 through 2024 for all groundfish species

			Average catch 2020 through 2024			
FMP Area/Species	Average first wholesale value 2020-2023 ($)*	Average ex-vessel price 2020-2023 ($ per mt)*	Discard (mt)	Retained (mt)	Retained catch as a % of total catch	Total (mt)
BSAI	**480,802,489**	$271	**44,023**	**1,730,291**	97.5%	1,774,313
Arrowtooth Flounder	2,557,626	$281	1,084	8,020	88.1%	9,104
Atka Mackerel	25,476,960	$402	763	62,662	98.8%	63,425
BSAI Alaska Plaice	3,701,883	$254	1,029	13,539	92.9%	14,568
BSAI Kamchatka Flounder	2,177,723	$315	226	6,697	96.7%	6,923
BSAI Other Flatfish	577,215	$186	1,799	1,306	42.1%	3,105
BSAI Shortraker Rockfish	109,505	$374	60	233	79.6%	292
Skate	1,337,063	$56	12,626	11,277	47.2%	23,903
Flathead Sole	2,770,358	$245	880	10,414	92.2%	11,293
Greenland Turbot	1,513,364	$1,017	58	1,431	96.1%	1,488
Northern Rockfish	1,493,744	$179	714	7,643	91.5%	8,358
Octopus	75,240	$255	207	88	29.9%	295
Other Rockfish	529,975	$447	458	728	61.4%	1,186
Pacific Cod	75,767,584	$572	1,996	130,399	98.5%	132,396
Pacific Ocean Perch	9,837,330	$268	1,488	35,236	95.9%	36,723
Pollock	299,474,762	$229	14,685	1,294,812	98.9%	1,309,496
Rock Sole	6,459,730	$279	984	22,141	95.7%	23,125
Rougheye Rockfish	80,900	$150	239	301	55.7%	541
Sablefish	12,360,717	$1,849	1,505	5,182	77.5%	6,687
Sculpin	2,145	$2	1,003	13	1.3%	1,016
Shark	297	$1	193	13	6.5%	206
Yellowfin Sole	34,498,369	$287	2,026	118,157	98.3%	120,183
GOA	**108,176,562**	**$536**	**8,061**	**193,847**	**96.0%**	**201,908**
Arrowtooth Flounder	999,049	$72	1,264	12,690	90.9%	13,954
Atka Mackerel	302,588	$463	60	594	90.8%	654
Skate	4,243	$12	310	46	12.9%	356
Flathead Sole	115,202	$123	92	846	90.2%	937
GOA Deep Water Flatfish	2,065	$20	69	32	31.4%	101
GOA Demersal Shelf Rockfish	34,187	$1,699	1	19	93.9%	20
GOA Dusky Rockfish	692,039	$259	66	2,609	97.5%	2,675
GOA Rex Sole	162,368	$253	48	594	92.6%	642
GOA Shallow Water Flatfish	338,136	$148	520	1,761	77.2%	2,281
GOA Skate, Big	189,170	$378	231	270	53.9%	501
GOA Skate, Longnose	73,729	$205	253	107	29.7%	360
GOA Thornyhead Rockfish	318,833	$1,133	24	258	91.6%	281
Northern Rockfish	396,469	$217	39	1,785	97.9%	1,823
Octopus	35,516	$367	50	47	48.4%	97
Other Rockfish	99,157	$127	295	484	62.1%	779
Pacific Cod	7,701,234	$577	850	12,493	93.6%	13,343
Pacific Ocean Perch	6,826,763	$246	908	26,841	96.7%	27,748
Pollock	27,985,703	$237	1,276	116,992	98.9%	118,267
Rougheye Rockfish	125,730	$331	55	325	85.5%	380
Sablefish	61,627,952	$3,952	889	14,706	94.3%	15,595
Sculpin	77	$1	80	1	1.1%	80
Shark	626	$1	585	18	3.0%	604
Shortraker Rockfish	145,727	$341	97	331	77.4%	428
Grand Total	**588,979,051**	**$298**	**52,083**	**1,924,138**	**97.4%**	**1,976,221**

Source: AKFIN; Source file: MRA_Overview (1-6-25)

*As of publishing date 2024 value data is not yet available

Table 3-4 Average total BSAI target and incidental catch (mt) by target fisheries and groundfish species, 2020 through 2024

	Target fisheries													
Species	*Alaska Plaice*	*Arrowtooth Flounder*	*Atka Mackerel*	*Flathead Sole*	*Greenland Turbot*	*Kamchatka Flounder*	*Other Flatfish*	*Pacific Cod*	*Pollock*	*Rock Sole*	*Rockfish*	*Sablefish*	*Yellowfin Sole*	***Total incidental catch by species***
Alaska Plaice	518	4	0	492	0	0	0	15	149	2,197	0	0	11,192	**14,050**
Arrowtooth Flounder	1	2,515	363	965	69	1,431	152	578	405	152	746	176	1,549	**6,587**
Atka Mackerel	0	151	54,906	0	3	208	8	70	282	0	7,782	15	0	**8,519**
Flathead Sole	6	369	9	4,263	63	37	66	536	1,258	778	195	81	3,629	**7,028**
Greenland Turbot	0	150	33	130	290	512	42	27	53	0	143	100	7	**1,198**
Kamchatka Flounder	0	615	277	191	121	4,628	70	68	88	8	584	178	94	**2,295**
Other Flatfish	14	211	24	84	41	32	249	340	283	528	217	117	964	**2,856**
Pacific Cod	70	133	2,351	1,080	5	30	44	109,119	5,833	3,816	859	41	8,945	**23,205**
Pollock	266	594	1,249	3,469	48	853	68	5,926	1,261,598	7,590	2,866	114	24,851	**47,894**
Rock Sole	79	26	81	898	0	2	14	850	765	11,164	59	12	9,174	**11,961**
Pacific Ocean Perch	0	301	8,039	192	34	713	79	29	2,657	0	24,611	55	13	**12,112**
Sablefish	0	410	220	165	113	673	166	176	1,133	0	610	3,020	1	**3,667**
Yellowfin Sole	240	13	1	2,256	0	0	0	695	825	8,805	1	0	107,345	**12,837**
Skate	31	207	389	562	30	150	22	18,701	619	278	217	59	2,590	**23,855**
Shortraker Rockfish	0	23	32	20	8	14	12	10	9	0	155	10	0	**292**
Northern Rockfish	0	7	4,559	1	0	67	1	50	75	0	3,596	1	0	**8,358**
Other Rockfish	0	53	364	45	43	36	29	59	22	1	389	145	1	**1,185**
Rougheye Rockfish	0	13	148	3	2	43	3	35	2	0	285	6	0	**541**
Octopus	0	1	1	2	0	0	1	279	2	0	3	4	1	**294**
Sculpin	3	20	62	35	4	6	1	473	27	58	38	0	290	**1,016**
Shark	0	2	5	2	1	10	0	22	155	0	5	1	3	**206**
Total incidental catch by target	**710**	**3,305**	**18,206**	**10,593**	**586**	**4,817**	**778**	**28,938**	**14,643**	**24,211**	**18,750**	**1,115**	**63,304**	**189,955**

Source: AKFIN; source file MRA_Target(2-3-25)
Cell shading denotes incidental catch while non-shaded denotes target catch in the target fishery

Table 3-5 Average total GOA target and incidental catch (mt) by target fisheries and groundfish species, 2020 through 2024

Species	Target fishery: Arrowtooth Flounder	Flathead Sole	Pacific Cod	Pollock	Rex Sole	Sablefish	Shallow Water Flatfish	Rockfish	**Total incidental catch by species**
Arrowtooth Flounder	10,248	2	133	1,075	78	365	361	1,692	**3,706**
Flathead Sole	535	4	21	138	13	4	142	80	**933**
Pacific Cod	707	1	9,374	2,403	7	38	340	467	**3,963**
Pollock	420	14	165	115,829	6	29	123	1,682	**2,439**
Rex Sole	348	1	7	48	89	6	27	116	**553**
Sablefish	347	0	87	205	21	14,094	40	801	**1,501**
Shallow Water Flatfish	263	1	132	453	12	6	1,382	32	**899**
Pacific Ocean Perch	830	0	6	1,416	37	29	26	25,404	**2,345**
Northern Rockfish	67	0	2	1	0	1	0	1,752	**71**
Dusky Rockfish	157	0	4	33	0	2	1	2,478	**197**
Atka Mackerel	55	0	1	1	0	0	1	596	**654**
Skate	23	0	229	9	1	75	4	15	**356**
Skate, Big	149	0	230	54	0	26	29	6	**495**
Skate, Longnose	52	0	146	16	0	109	9	29	**359**
Deep Water Flatfish	47	0	2	8	2	16	5	20	**101**
Demersal Shelf Rockfish	0	0	0	0	0	19	0	1	**20**
Thornyhead Rockfish	14	0	3	1	10	117	0	135	**281**
Shortraker Rockfish	7	0	2	66	0	132	0	219	**428**
Other Rockfish	14	0	43	8	0	30	5	679	**779**
Rougheye Rockfish	28	0	2	50	0	132	0	168	**380**
Octopus	7	0	78	1	0	3	6	1	**97**
Sculpin	3	0	1	9	0	0	61	6	**80**
Shark	48	0	75	110	2	333	11	24	**603**
Total incidental catch by target fishery	**4,122**	**19**	**1,369**	**6,107**	**191**	**1,473**	**1,193**	**6,768**	**21,241**

Source: AKFIN; source file MRA_Target(2-3-25)
Cell shading denotes incidental catch while non-shaded denotes target catch in the target fishery

3.4 Description of Sector Groundfish Activity in the BSAI and GOA

3.4.1 Description of Groundfish Sectors

The wide variety of fishing vessels participating in the federal regulated groundfish fisheries off Alaska can be grouped into different fishing fleets based on the fish species they target and the gear used. These fleets have become further defined over time through licenses and endorsements, eligibility to participate in catch share programs, and other regulations that have affected fleet composition.

The following is an overview of each of the different sectors that could be impacted by the proposed MRA revisions. These sectors include the Amendment 80 (A80) C/P, American Fisheries Act (AFA) C/P, trawl CV (AFA CV and non-AFA trawl CV), (hook-and-line) HAL C/P, HAL CV, and Pot C/P / CV.

Amendment 80 C/P

Unlike the AFA C/P sector that targets primarily BS pollock, the A80 sector targets multiple species like the BSAI flatfish fisheries, along with the Atka mackerel and Pacific ocean perch fisheries in the Aleutian Islands. Typically, the fish are processed either with the head and guts removed, or frozen whole. Discarding had long been a management concern for this fleet. Historically, in the multi-species flatfish fisheries, the lower valued fish (less valuable species, smaller fish, and fish without roe) were discarded, and only the more valuable fish retained. Vessels did not have meal plants to accommodate fish that were discarded at sea. The race for fish exacerbated this economic discarding as less valuable fish used up processing time and limited freezer space. To address these discards, the Council required full retention of pollock and Pacific cod, and a minimum groundfish retention standard of 85%, which was later dropped due to non-enforceability and the fleet achieving a retention rate higher than the standard once operating under a cooperative program.

To provide the tools for the fleet to increase retention, the non-AFA trawl C/P sector or Amendment 80 (A80) sector to the BSAI Groundfish FMP, implemented in 2008, facilitated the formation of fishery cooperatives for non-AFA trawl C/Ps. The program originally allocated five BSAI non-pollock trawl groundfish species to permit holders that formed a cooperative within the A80 sector. The A80 sector, after subtracting CDQ allocations, is allocated a portion of the TAC for POP in the Aleutian Islands (AI), BSAI Atka mackerel, and yellowfin sole along with all the remaining rock sole and flathead sole TAC in the BSAI. Later, Amendment 85 allocated the A80 sector 13.4 percent of BSAI Pacific cod TAC.

Officially, the final rule for A80 published in the Federal Register on September 14, 2007, listed a total of 28 vessels that would be considered A80 vessels. Of these 28 vessels, three have sunk and one of the named vessels has chosen to opt out of the A80 but continues to participate in the GOA (F/V Golden Fleece).

Amongst the A80 species, yellowfin sole and Atka mackerel are the largest contributors of total first wholesale revenue for the sector, followed by Pacific cod and AI POP. The last two A80 species, rock sole, and flathead sole, although contributing less to total revenue for the sector are nevertheless important species for some A80 companies since the sector sorts roughly into companies or groups of vessels that primarily focus more on either flatfish or Atka mackerel and AI POP based on the qualified catch history associated with their permits.

In addition to the six species for which BS and/or AI TAC are allocated to A80 QS holders, A80 vessels also catch and process many other BSAI groundfish species including arrowtooth flounder, Alaska plaice, sablefish, and pollock to name just a few. Of the many BSAI non-A80 species caught by the A80 sector during the 2020 through 2023 period, arrowtooth flounder, Alaska plaice, Kamchatka flounder, Greenland turbot, and Northern rockfish had retention rates routinely above 90 percent. Of these species, Greenland

turbot had the highest average first wholesale price per mt during the 2020 through 2023 period, followed by sablefish, Kamchatka flounder, and arrowtooth flounder.

The A80 sector also participates in the Central GOA Rockfish Program and in the GOA open access fisheries. All of the Central GOA Rockfish Program fisheries had retention rates higher than 90 percent including POP, Northern rockfish, dusky rockfish, shortraker rockfish, thornyhead rockfish (Table 3-6). Other open access fisheries with retention rates greater than 80 percent include arrowtooth flounder, Atka mackerel, shallow water flatfish, and pollock. Species with high average first wholesale prices per mt during the 2020 through 2023 period include thornyhead rockfish, sablefish, shortraker rockfish, rex sole, and Atka mackerel. Interestingly, despite the high prices for sablefish, the A80 retention rates ranged from 58 percent to 72 percent during the 2020 through 2023 period (Table 3-6).

AFA C/P

The AFA specifically lists 20 C/Ps eligible to participate in the offshore fisheries, as well as seven CVs eligible to fish and deliver a suballocation to C/Ps. In addition, one additional "head-and-gut" C/P (Ocean Peace) met the requirements in the AFA that allows it to harvest and process up to 0.5 percent of the directed BSAI pollock allocation to C/Ps.

These large factory trawlers have the processing equipment to produce surimi and/or fillets from pollock, Pacific cod, and other groundfish. These vessels also have room for equipment to produce fishmeal, minced product, and other product forms. On these vessels, the fish are put through various processing lines (depending on product choices), frozen, boxed, and stored in the freezer compartment until the vessel is offloaded days or weeks later. This sector operates in a pollock cooperative under AFA, which allows them to modify operations in terms of when they fish and what they process to account for changing weather, markets, and access to fisheries. Pollock is the primary species harvested by this sector, but two or three vessels have targeted Pacific cod, while several vessels target yellowfin sole. AFA C/Ps generally fish the area north of Unimak Island during the A-season and from areas south of St. George Island northward during the B-season.

As noted in Table 3-7, the average first wholesale gross value of the fleet's primary target from 2020 through 2023, pollock in the BSAI, was $680.91 million which is 96 percent of the total first wholesale gross value.

As noted above, the sector's primary focus is on pollock with retention rates above 99 percent, but the sector does routinely have high retention rates for several other species (Table 3-7). These include Atka mackerel, rock sole, yellowfin sole, Pacific cod, arrowtooth flounder, Alaska plaice, sablefish, POP, Greenland turbot, and flathead sole. Most of these species had retention rates greater than 80 percent at some point during the 2020 through 2023 period. Of these species, Greenland turbot had the highest average first wholesale price per mt during the 2020 through 2023 period followed by Pacific cod, Atka mackerel, pollock, and sablefish (Table 3-7).

Trawl CV

The trawl CV sector includes all trawl CVs that 1) are issued an AFA permit for eligibility to participate in the directed BSAI pollock fishery and 2) are not issued an AFA permit. This includes the Pacific cod Trawl Cooperative (PCTC) program implemented in 2024. The AFA CVs rely almost exclusively on pollock harvested in the BS, while Pacific cod is the second most important species in terms of volume for these vessels. While nearly all the groundfish harvested by the larger AFA vessels are delivered to shoreside processors, many of the smaller vessels deliver their catch to motherships or C/Ps. In 1998, the AFA established participation requirements for the BSAI pollock fishery and authorized the formation of cooperatives. For the inshore sector, eligible processing plants and CVs were defined based on catch or processing history, and a total of 111 CVs and eight processing plants qualified. The AFA specifies that

pollock taken in the inshore sector's directed fishery can only be taken by qualified vessels and delivered to qualified processing plants. These vessels are collectively called the AFA CV fleet.

The non-AFA trawl CVs are not eligible to participate in the directed BSAI pollock fishery. Non-trawl trawl CVs in this group are typically between 60 ft and 125 ft but occasionally vessels less than 60 ft participate in the sector. The non-AFA trawl CVs harvest BSAI Pacific cod and the several species in the GOA groundfish fishery. The PCTC Program assigns Pacific cod harvest quota to qualifying groundfish License Limitation Program (LLP) license holders and qualifying processors (88 FR 53704, August 8, 2023). The Program is a limited access privilege program for the harvest of Pacific cod in the Bering Sea and Aleutian Islands Management Area (BSAI) trawl catcher vessel (CV) sector. Under the Program, participants holding quota share (QS) form harvesting cooperatives in association with a processor to harvest the annual harvest privilege of Pacific cod.

Unlike trawl C/Ps that process their catch as-sea, trawl CVs at haulback dump their codends into the fish-hold below decks for later delivery to shoreside processors at the end of the trip or if the CV is delivering to a mothership the vessel will tow the codend to the mothership for transfer, unloading, and processing of the catch. CV delivering to the inshore sector have traditionally fished the area north of Unimak Island during the A-season, venturing further north along the shelf break during the B-season.

As noted in Table 3-8, the fleet's primary target in the BSAI was pollock followed by Pacific cod, yellowfin sole, Atka mackerel, POP, and Alaska plaice. The average total gross exvessel value during 2020 through 2023 for the BSAI was $265.7 million with pollock contributing 89 percent of the total at $237.6 million (Table 3-8). In the GOA, the average total gross exvessel value during 2020 through 2023 was $46.2 million of which pollock contributed 77 percent of the total at $34.7 million (Table 3-8). AFA CVs deliver whole fish to the processing plants, who then convert the landings to a range of products that typically includes fillets, surimi, roe, minced fish, and fish meal.

Retention rates for the primary BSAI groundfish species during the 2020 through 2033 period routinely exceeded 90 percent for pollock, Pacific cod, yellowfin sole, Atka mackerel, POP, and Alaska plaice (Table 3-8). Of the BSAI groundfish species, sablefish, Greenland turbot, and Pacific cod had the highest average exvessel value per mt during the 2020 through 2023 period. For the GOA species that routinely exceed 90 retention rates during 2020 through 2023 were pollock, POP, Pacific cod, other rockfish, Northern rockfish, thornyhead rockfish, dusky rockfish, and flathead sole (Table 3-8). Of the GOA groundfish species, sablefish, Pacific cod, big skates, and longnose skates had the highest average exvessel value per mt during 2020 through 2023 (Table 3-8).

HAL C/P

The HAL C/P sector includes vessels operating as C/P using HAL gear. These vessels, also known as freezer longliners, focus their effort on BSAI Pacific cod. Sablefish and Greenland turbot are secondary targets for some HAL C/Ps.

The Freezer Longline Coalition (FLC) is comprised of owners and operators of freezer longline vessels participating in the Pacific cod fisheries of the North Pacific. Since 2010, FLC members, who account for all 36 LLP licenses with a Pacific cod HAL C/P endorsement for the BS, have operated as a voluntary cooperative, the Freezer Longline Conservation Cooperative (FLCC). Each year, the FLCC issues quota shares to members in proportion to historical fishing activity associated with each LLP license of the BSAI HAL C/P sector allocation. FLCC members are free to exchange their quota shares among themselves, and to stack quota shares on individual HAL C/Ps.

As noted in Table 3-9, the average first wholesale gross value of the fleet's primary target in the BSAI from 2020 through 2023 was $134.84 million which was 93 percent of the total first wholesale gross value for the sector in the BSAI. The sector also received greater than 3 percent of their total average first wholesale gross value from pollock ($4.97 million) and 3 percent from BSAI skates ($4.93 million).

These three fisheries made up nearly 100 percent of the BSAI average total first wholesale gross revenue for the sector during the 2020 through 2023 period. In the GOA, the primary targets were Pacific cod and sablefish at $3.36 million and $1.24 million which represents 71 percent and 26 percent of the average total first wholesale gross value for the sector in the GOA. These two fisheries represent nearly 100 percent of the average total first wholesale gross value for the sector during the 2020 through 2023 period.

HAL C/P retention rates for the BSAI Pacific cod fishery during the 2020 through 2023 period was 99 percent and retention rates for BS pollock was greater than 85 percent for each year. For BSAI skates, the retention rates were less than 50 percent during the same period. In the GOA, retention rates for Pacific cod ranged between 98 and 99 percent during the 2020 through 2023 period while sablefish retention rates for the sector ranged between 72 percent to 98 percent during the same period.

HAL CV

This group of CVs uses longline gear to target groundfish, particularly Pacific cod in the BSAI and sablefish, Pacific cod, and rockfish. The fleet's primary target, Pacific cod in the BSAI, had an average exvessel value of $224 thousand during the 2020 through 2023 period and while sablefish had an average exvessel value of $380 thousand. In the GOA, the sablefish fishery had an average exvessel value of $19.55 million during the same period which represents 92 percent of the total exvessel value. The GOA Pacific cod fishery generated $1.42 million in exvessel revenue for the fleet during the same period which represented 7 percent of the total exvessel revenue. The remaining exvessel revenue for the fleet in the GOA was from the rockfish fisheries.

Beginning in 2012, the GOA Pacific cod TAC was allocated among sectors. In the Western GOA, the longline apportionment is 1.4 percent for CVs and 19.8 percent for C/Ps. In the Central GOA, the apportionment is 14.6 percent for CVs <50' length overall (LOA), 6.7 percent for CVs ≥50' LOA, and 5.1 percent for the C/Ps. These allocations are further apportioned between A and B seasons. In the BSAI, 2 percent of the Pacific cod TAC is allocated to a longline/pot CV sector <60' LOA, and 0.2 percent to longline CVs ≥ 60' LOA. In the BSAI Pacific cod TAC is allocated such that the longline CVs<60' LOA share a 2 percent allocation of the TAC with vessels < 60' LOA using pot gear.

Amendment 119 to the FMP for Groundfish of the BSAI and Amendment 107 to the FMP for Groundfish of the GOA requires that the operator of a federally permitted CVs using HAL, pot, or jig gear in the BSAI and GOA retain and land all rockfish (*Sebastes* and *Sebastolobus* species) caught while fishing for groundfish or Pacific halibut. Therefore, these vessels would not be subject to rockfish MRA requirements. This action was necessary to improve the identification of rockfish species catch by vessels using electronic monitoring, provide more precise estimates of rockfish catch, reduce waste and incentives to discard rockfish, reduce overall enforcement burden associated with rockfish MRA violations, and promote more consistent management between State and Federal fisheries.

HAL CV retention rates for the BSAI Pacific cod fishery during the 2020 through 2023 period ranged between 86 percent in 2023 and 99 percent in 2021 (Table 3-10). For BSAI sablefish, the retention rates ranged between 73 percent and 100 percent during the 2020 through 2023 period. In the GOA, retention rates for sablefish ranged between 93 percent in 2020 and 96 percent in 2022 while Pacific cod retention rates for the sector ranged between 66 percent to 99 percent during the same period. Retention rates for rockfish species during the 2020 through 2023 period have increased due to the above noted Amendment 119 in the BSAI and Amendment 107 in the GOA which requires full retention of rockfish species (*Sebastes* and *Sebastolobus* species). These amendments were effective March 23, 2020.

Pot C/P / CV

This fleet targets Pacific cod with square or conical pots usually set on single lines. Pots are set in areas where Pacific cod is aggregated and retrieved once every 24 hours. Most of the vessels participate in other

Federal fisheries, particularly the halibut and sablefish IFQ fisheries, and the crab fishery. Some vessels use pot gear to catch Pacific cod for bait they later use in the crab fishery. In the BSAI, the pot CV fleet is allocated Pacific cod depending upon vessel size. Pot vessels < 60' LOA share an allocation of 2 percent with the hook-and-line CV < 60', while pot CVs ≥ 60' are allocated 8.4 percent of the Pacific cod TAC. Pot C/Ps are allocated 1.5 percent of the BSAI Pacific cod TAC. Beginning in 2012, the GOA Pacific cod TAC was allocated among various sectors. After the allocation to the jig sector is made, the pot CVs and C/Ps receive 38.0 percent of the Western GOA TAC and 27.8 percent of the Central GOA Pacific cod TAC. These allocations are further apportioned into A and B seasons.

The fleet's primary target in the BSAI, Pacific cod, had a combined average exvessel value of $17 million during the 2020 through 2023 period, while the sablefish fishery had an average exvessel value of $11 million during the same period (Table 3-11). In the GOA, the average exvessel value of the primary fishery, sablefish, during the 2020 through 2023 period was $53 million which represented 95 percent of the average total exvessel revenue during this same period, while the exvessel value of the GOA Pacific cod fishery was $3 million.

Pot CV and C/Ps retention rates for the BSAI Pacific cod fishery during the 2020 through 2023 period was over 99 percent. For BSAI sablefish, the retention rates ranged between 97 percent and 100 percent during the 2020 through 2023 period. In the GOA, retention rates for sablefish 97 percent and 99 percent during the same period. As noted in the description of HAL CVs, the pot CVs are required to retain and land all rockfish (*Sebastes* and *Sebastolobus* species) caught while fishing for groundfish or Pacific halibut in the BSAI and GOA.

Table 3-6 A80 average first wholesale value (millions of $), average first wholesale gross price per mt ($), discarded catch (mt), retained catch (mt) and total catch (mt) from 2020 through 2023 by FMP area and groundfish species

			2020				2021				2022				2023			
FMP Area/Species	FWV ($M)	P ($ per MT)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)
BSAI	**$316.71**	**$988**	**21,781**	**299,302**	**93.2%**	**321,083**	**22,451**	**269,137**	**92.3%**	**291,588**	**23,142**	**323,393**	**93.3%**	**346,535**	**21,666**	**300,913**	**93.3%**	**322,579**
Arrowtooth Flounder	$7.08	$912	468	9,225	95.2%	9,693	616	7,575	92.5%	8,191	611	6,388	91.3%	6,999	328	5,851	94.7%	6,179
Atka Mackerel	$70.56	$1,284	480	50,756	99.1%	51,236	462	55,160	99.2%	55,622	574	52,578	98.9%	53,151	892	58,983	98.5%	59,876
BSAI Alaska Plaice	$8.43	$684	714	13,699	95.0%	14,412	831	12,319	93.7%	13,150	773	8,866	92.0%	9,639	569	11,566	95.3%	12,134
BSAI Kamchatka Flounder	$8.61	$1,202	152	6,946	97.9%	7,098	142	6,391	97.8%	6,532	213	8,021	97.4%	8,234	91	6,674	98.7%	6,765
BSAI Other Flatfish	$1.45	$624	2,253	712	24.0%	2,965	1,394	708	33.7%	2,101	974	962	49.7%	1,936	747	1,549	67.5%	2,296
BSAI Shortraker Rockfish	$0.16	$538	25	217	89.6%	242	120	323	73.0%	443	36	230	86.3%	266	31	196	86.5%	226
BSAI Skate	$0.71	$168	2,320	1,492	39.1%	3,812	3,149	1,762	35.9%	4,911	3,415	1,100	24.4%	4,516	2,710	1,005	27.1%	3,715
Flathead Sole	$6.76	$791	191	6,202	97.0%	6,393	213	7,891	97.4%	8,105	283	12,099	97.7%	12,382	155	7,160	97.9%	7,315
Greenland Turbot	$6.24	$4,056	58	1,881	97.0%	1,939	31	1,542	98.0%	1,573	47	1,402	96.8%	1,448	17	1,178	98.6%	1,196
Northern Rockfish	$4.80	$631	834	6,384	88.5%	7,218	363	5,352	93.7%	5,715	435	7,009	94.2%	7,443	451	9,615	95.5%	10,067
Octopus	$0.00	$59	5	2	27.5%	6	11		0.0%	11	12	0	2.1%	12	9	2	17.5%	11
Other Rockfish	$0.43	$422	351	504	59.0%	854	274	597	68.6%	871	440	753	63.1%	1,193	463	656	58.6%	1,119
Pacific Cod	$32.11	$1,977	197	17,051	98.9%	17,248	257	13,693	98.2%	13,951	451	16,857	97.4%	17,308	303	16,182	98.2%	16,485
Pacific Ocean Perch	$28.45	$907	686	30,340	97.8%	31,026	1,072	29,827	96.5%	30,898	861	30,286	97.2%	31,147	832	31,584	97.4%	32,416
Pollock	$33.71	$881	7,919	29,962	79.1%	37,882	10,546	22,197	67.8%	32,743	10,404	28,968	73.6%	39,372	11,871	31,194	72.4%	43,064
Rock Sole	$14.08	$796	838	20,096	96.0%	20,934	511	11,324	95.7%	11,835	496	15,244	96.8%	15,740	590	21,664	97.3%	22,254
Rougheye Rockfish	$0.19	$423	89	334	79.0%	423	156	293	65.2%	450	148	233	61.3%	381	239	300	55.6%	539
Sablefish	$5.40	$2,059	993	664	40.1%	1,657	1,152	880	43.3%	2,033	1,244	1,961	61.2%	3,205	379	3,220	89.5%	3,598
Sculpin	$0.00	$0	2,219	9	0.4%	2,228												
Shark	$0.00	$0	25		0.0%	25	21		0.0%	21	41		0.0%	41	24		0.0%	24
Yellowfin Sole	$87.53	$830	966	102,827	99.1%	103,793	1,130	91,303	98.8%	92,433	1,683	130,436	98.7%	132,120	965	92,333	99.0%	93,298
GOA	**$30.52**	**$942**	**2,875**	**24,872**	**89.6%**	**27,747**	**4,473**	**29,981**	**87.0%**	**34,455**	**3,613**	**33,262**	**90.2%**	**36,875**	**2,447**	**28,069**	**92.0%**	**30,515**
Arrowtooth Flounder	$6.17	$816	318	5,223	94.3%	5,541	1,025	7,300	87.7%	8,325	586	9,160	94.0%	9,746	370	6,255	94.4%	6,625
Atka Mackerel	$0.87	$1,220	94	513	84.6%	607	104	828	88.8%	932	46	817	94.7%	862	17	446	96.4%	462
GOA Skate	$0.00	$103	33	1	2.2%	33	35	6	13.5%	41	34	2	5.9%	36	20	2	7.6%	22
Flathead Sole	$0.24	$610	25	351	93.4%	376	111	462	80.7%	573	73	387	84.2%	459	14	153	91.7%	166
GOA Deep Water Flatfish	$0.00	$73	32	5	14.4%	37	49	14	21.9%	62	76	16	17.5%	92	36	20	35.9%	57
GOA Dusky Rockfish	$1.53	$810	44	1,220	96.5%	1,264	103	1,701	94.3%	1,803	29	1,667	98.3%	1,697	34	2,754	98.8%	2,789
GOA Rex Sole	$0.50	$1,253	47	455	90.6%	502	30	206	87.5%	236	51	596	92.1%	647	7	215	96.9%	222
GOA Shallow Water Flatfish	$0.85	$704	194	2,007	91.2%	2,201	255	1,350	84.1%	1,605	156	806	83.8%	961	23	11	32.0%	33
GOA Skate, Big	$0.01	$460	13	3	18.8%	16	20	11	35.3%	31	22	16	42.3%	38	5	10	64.2%	15
GOA Skate, Longnose	$0.01	$362	25	5	17.2%	30	43	19	30.7%	62	30	6	16.5%	36	29	3	8.4%	32
GOA Thornyhead Rockfish	$0.49	$3,038	10	165	94.2%	176	4	117	96.3%	121	8	231	96.5%	239	6	110	95.0%	115
Northern Rockfish	$1.32	$791	32	1,901	98.3%	1,933	34	1,880	98.2%	1,914	28	1,593	98.3%	1,621	21	1,174	98.3%	1,195
Octopus	$0.00	$83	19		0.0%	19	7	2	22.9%	9	2		0.0%	2	3		0.0%	3
Other Rockfish	$0.28	$465	146	253	63.3%	399	356	443	55.4%	799	308	380	55.2%	689	296	200	40.3%	497
Pacific Cod	$0.74	$828	387	317	45.0%	704	823	298	26.5%	1,121	574	542	48.6%	1,117	395	257	39.4%	652
Pacific Ocean Perch	$13.51	$976	686	10,916	94.1%	11,603	492	13,087	96.4%	13,580	634	14,965	95.9%	15,598	410	14,173	97.2%	14,583
Pollock	$0.56	$399	82	644	88.7%	726	469	1,301	73.5%	1,770	452	1,010	69.1%	1,462	405	1,237	75.3%	1,643
Rougheye Rockfish	$0.13	$672	5	144	96.7%	149	5	174	97.2%	179	14	205	93.6%	219	27	179	86.9%	206
Sablefish	$3.02	$2,998	401	543	57.6%	944	435	593	57.7%	1,028	446	715	61.6%	1,161	251	646	72.0%	897
Sculpin	$0.00	$0	197	0	0.3%	198												
Shark	$0.00	$0	78		0.0%	78	66		0.0%	66	35		0.0%	35	72		0.0%	72
Shortraker Rockfish	$0.28	$1,394	6	205	97.0%	212	7	191	96.5%	198	9	149	94.5%	158	5	225	97.8%	230

Source: AKFIN; Source file: MRA_Overview (1-6-25).
FWV = Average first wholesale value (2000-2023) in millions of $ P = Average first wholesale price (2020-2023) $ per mt D = discarded catch R = retained catch T=total catch
R % of T = retained catch as a % of total catch

Table 3-7 AFA C/P average first wholesale value (millions of $), average first wholesale gross price per MT ($), discarded catch (mt), retained catch (mt) and total catch (mt) from 2020 through 2023 by FMP area and groundfish species

			2020				2021				2022				2023			
FMP Area/Species	FWV ($M)	P ($)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)
BSAI	**$709.78**	**$1,172**	**5,854**	**626,978**	**99.1%**	**632,833**	**5,517**	**642,875**	**99.1%**	**648,392**	**3,140**	**520,229**	**99.4%**	**523,369**	**3,337**	**615,511**	**99.5%**	**618,848**
Arrowtooth Flounder	$0.21	$765	60	243	80.3%	303	33	265	89.0%	298	19	216	91.8%	235	121	151	55.5%	273
Atka Mackerel	$2.91	$1,293	24	1,776	98.7%	1,800	30	1,735	98.3%	1,765	13	2,431	99.5%	2,444	33	2,955	98.9%	2,988
BSAI Alaska Plaice	$1.15	$618	453	1,672	78.7%	2,125	380	1,387	78.5%	1,767	123	1,028	89.3%	1,150	355	2,065	85.4%	2,420
BSAI Kamchatka Flounder	$0.03	$870	10	45	82.2%	54	4	18	83.5%	22	2	18	88.8%	20	15	8	36.3%	23
BSAI Other Flatfish	$0.08	$346	227	102	31.0%	329	120	77	39.2%	198	111	26	19.0%	137	206	27	11.6%	233
BSAI Shortraker Rockfish	$0.00	$340	13	21	62.3%	33	4	3	42.5%	6	0	2	98.5%	2	5	3	40.3%	8
BSAI Skate	$0.17	$236	344	361	51.2%	705	372	565	60.3%	937	405	308	43.1%	713	383	97	20.2%	479
Flathead Sole	$0.75	$676	195	1,027	84.0%	1,221	156	1,019	86.7%	1,175	183	1,086	85.6%	1,269	92	679	88.0%	772
Greenland Turbot	$0.02	$2,832	7	18	72.8%	25	0	2	96.5%	2	0	1	68.7%	1	2	2	49.2%	3
Northern Rockfish	$0.08	$339	132	133	50.2%	265	123	139	53.1%	261	148	116	44.0%	264	47	97	67.4%	144
Octopus	$0.00	$220	1	0	23.3%	1	0	0	31.2%	0	0	1	68.8%	1	0	0	48.9%	0
Other Rockfish	$0.01	$345	7	13	64.4%	20	9	6	38.9%	15	4	9	69.4%	13	10	6	37.9%	16
Pacific Cod	$8.96	$1,719	889	5,007	84.9%	5,896	1,682	4,637	73.4%	6,319	140	3,959	96.6%	4,099	43	4,486	99.0%	4,529
Pacific Ocean Perch	$1.56	$677	1,353	2,810	67.5%	4,163	541	1,749	76.4%	2,291	255	1,489	85.4%	1,744	101	922	90.1%	1,023
Pollock	$680.91	$1,183	1,388	599,041	99.8%	600,429	1,658	620,580	99.7%	622,239	1,210	492,314	99.8%	493,524	1,564	585,285	99.7%	586,849
Rock Sole	$1.79	$749	184	1,939	91.3%	2,123	290	1,531	84.1%	1,822	288	1,696	85.5%	1,984	125	3,487	96.5%	3,611
Rougheye Rockfish	$0.00	$279	4	4	52.8%	8	1	3	73.6%	4	3	8	72.7%	11	19	3	13.2%	22
Sablefish	$0.03	$1,145	36	9	21.0%	45	20	4	16.3%	23	2	12	84.2%	14	0	8	94.3%	8
Sculpin	$0.00	$1	185	25	12.0%	210												
Shark	$0.00	$5	54	1	1.8%	55	46	0	0.5%	46	26	0	0.3%	26	40	0	0.5%	41
Yellowfin Sole	$11.13	$835	291	12,731	97.8%	13,022	48	9,154	99.5%	9,201	208	15,509	98.7%	15,716	176	15,230	98.9%	15,406

Source: AKFIN; Source file: MRA_Overview (1-6-25).
FWV = Average first wholesale value (2000-2023) in millions of $
P = Average first wholesale price (2020-2023) $ per mt.
D = discarded catch
R = retained catch
T=total catch
R % of T = retained catch as a % of total catch

Table 3-8 Trawl CV average exvessel value ($M), average exvessel price ($) per mt, discarded catch (mt), retained catch (mt) and total catch (mt) from 2020 through 2023 by FMP area and groundfish species

			2020				2021				2022				2023			
FMP Area/Species	EV ($M)	P ($ per MT)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)
BSAI	**$265.72**	**$362.12**	**7,618**	**805,149**	**99.1%**	**812,767**	**3,748**	**771,202**	**99.5%**	**774,950**	**2,650**	**617,673**	**99.6%**	**620,323**	**3,024**	**724,069**	**99.6%**	**727,094**
Arrowtooth Flounder	$0.05	$164.59	78	324	80.7%	401	90	175	66.0%	265	99	99	49.8%	198	109	209	65.8%	318
Atka Mackerel	$1.98	$499.39	183	5,630	96.8%	5,814	159	3,733	95.9%	3,891	31	2,411	98.7%	2,442	97	3,643	97.4%	3,740
BSAI Alaska Plaice	$0.43	$301.30	305	3,235	91.4%	3,541	71	873	92.5%	944	12	450	97.3%	463	119	579	83.0%	698
BSAI Kamchatka Flounder	$0.03	$320.72	17	226	93.0%	243	6	34	84.3%	40	18	9	32.4%	27	20	71	78.4%	91
BSAI Other Flatfish	$0.03	$89.29	417	352	45.8%	769	62	140	69.5%	202	61	82	57.5%	143	243	196	44.7%	439
BSAI Shortraker Rockfish	$0.00	$404.21	3	5	66.3%	7	0	1	78.5%	2	0	2	83.5%	2	0	4	98.7%	4
BSAI Skate	$0.02	$33.31	424	439	50.9%	863	307	338	52.4%	645	246	246	49.9%	492	254	274	51.9%	529
Flathead Sole	$0.11	$144.61	197	1,106	84.8%	1,303	163	565	77.6%	729	138	454	76.7%	592	77	432	84.9%	508
Greenland Turbot	$0.03	$966.54	4	68	94.4%	72	3	4	53.6%	7	4	0	11.4%	4	9	27	75.6%	36
Northern Rockfish	$0.07	$195.72	102	802	88.8%	904	12	157	93.0%	169	16	138	89.6%	154	6	191	97.0%	197
Octopus	$0.00	$64.45	2	2	48.7%	5	0	0	58.1%	1	1	0	13.6%	1	2	1	31.0%	2
Other Rockfish	$0.01	$256.78	40	65	62.0%	104	7	17	70.3%	24	5	18	77.5%	24	30	17	36.6%	47
Pacific Cod	$19.74	$778.10	152	30,720	99.5%	30,872	150	21,358	99.3%	21,508	141	24,698	99.4%	24,839	124	24,150	99.5%	24,274
Pacific Ocean Perch	$0.76	$253.26	832	4,429	84.2%	5,261	194	2,118	91.6%	2,312	32	1,864	98.3%	1,896	94	2,419	96.3%	2,512
Pollock	$237.60	$346.19	2,214	737,213	99.7%	739,427	1,441	734,247	99.8%	735,689	1,508	580,929	99.7%	582,437	999	686,758	99.9%	687,757
Rock Sole	$0.46	$324.76	205	2,665	92.9%	2,870	150	577	79.3%	728	204	466	69.6%	670	295	1,047	78.0%	1,342
Rougheye Rockfish	$0.00	$201.30	9	13	59.2%	22	3	9	71.4%	12	6	13	68.9%	19	17	21	56.5%	38
Sablefish	$1.71	$1,229.33	1,914	1,640	46.1%	3,554	708	516	42.1%	1,223	31	238	88.4%	269	107	421	79.7%	528
Sculpin	$0.00	$2.53	326	23	6.6%	349												
Shark	$0.00	$3.04	64	14	18.1%	78	122	7	5.6%	129	24	7	22.6%	31	226	16	6.8%	242
Yellowfin Sole	$2.67	$332.31	130	16,176	99.2%	16,307	97	6,333	98.5%	6,431	72	5,549	98.7%	5,621	200	3,591	94.7%	3,791
GOA	**$46.19**	**$319.74**	**3,748**	**141,157**	**97.4%**	**144,905**	**1,745**	**120,090**	**98.6%**	**121,834**	**2,080**	**151,924**	**98.6%**	**154,004**	**2,479**	**154,612**	**98.4%**	**157,090**
Arrowtooth Flounder	$0.59	$115.91	755	14,633	95.1%	15,388	446	842	65.4%	1,288	335	1,125	77.1%	1,460	334	1,929	85.3%	2,262
Atka Mackerel	$0.00	$124.10	0	0	43.5%	1	3	4	58.7%	7	0	17	99.9%	17		0	100.0%	0
GOA Skate	$0.00	$20.50	35	5	11.7%	39	2	3	51.4%	5	4	4	49.9%	7	5	5	49.5%	10
Flathead Sole	$0.10	$201.72	21	1,514	98.6%	1,536	25	101	80.3%	125	7	93	93.4%	100	12	284	95.9%	296
GOA Deep Water Flatfish	$0.00	$61.49	10	48	82.4%	59	9	3	26.0%	12	14	3	17.4%	17	12	20	61.9%	32
GOA Dusky Rockfish	$0.25	$273.68	11	912	98.9%	922	1	1,116	99.9%	1,116	8	870	99.1%	878	3	691	99.5%	694
GOA Rex Sole	$0.13	$515.26	10	726	98.6%	736	14	51	78.5%	65	20	29	59.3%	49	23	167	88.1%	190
GOA Shallow Water Flatfish	$0.23	$252.35	12	2,135	99.4%	2,147	100	129	56.2%	229	99	223	69.3%	321	117	846	87.8%	963
GOA Skate, Big	$0.19	$790.16	88	553	86.3%	641	22	61	73.6%	83	40	65	61.8%	104	6	142	95.8%	148
GOA Skate, Longnose	$0.06	$769.68	30	174	85.3%	204	1	22	97.3%	23	11	20	65.1%	31	21	16	44.0%	37
GOA Thornyhead Rockfish	$0.02	$568.25	1	26	95.8%	28	5	21	80.7%	26	14	23	62.2%	38	2	21	89.8%	23
Northern Rockfish	$0.09	$282.02	0	451	99.9%	452	2	459	99.6%	461	1	276	99.7%	277	1	126	99.3%	127
Octopus	$0.00	$450.03	24	15	38.5%	39	0	0	68.3%	0	0	1	87.2%	1	1	1	54.3%	2
Other Rockfish	$0.04	$187.04	2	132	98.7%	133	1	192	99.4%	193	25	211	89.5%	236	2	266	99.2%	268
Pacific Cod	$4.12	$804.05	692	2,031	74.6%	2,723	90	4,775	98.2%	4,865	100	6,990	98.6%	7,090	177	5,645	97.0%	5,822
Pacific Ocean Perch	$4.11	$283.35	459	13,129	96.6%	13,589	24	15,296	99.8%	15,320	430	13,451	96.9%	13,880	726	14,456	95.2%	15,182
Pollock	$34.71	$301.66	447	103,977	99.6%	104,424	843	96,358	99.1%	97,201	728	127,698	99.4%	128,425	911	129,246	99.3%	130,156
Rougheye Rockfish	$0.02	$314.94	0	59	99.8%	59	5	42	89.5%	47	14	89	86.7%	102	14	80	84.8%	94
Sablefish	$1.49	$1,833.24	842	545	39.3%	1,387	25	549	95.6%	574	80	640	88.8%	720	45	526	92.2%	571
Sculpin	$0.00	$0.66	195	4	1.8%	199												
Shark	$0.00	$6.71	108	40	26.8%	148	80	22	21.6%	103	81	10	11.4%	91	54	10	15.7%	63
Shortraker Rockfish	$0.03	$251.29	4	49	92.2%	53	46	45	49.2%	91	72	88	55.1%	160	13	135	91.1%	149

Source: AKFIN; Source file: MRA_Overview (1-6-25).
FWV = Average first wholesale value (2000-2023) in millions of $ P = Average first wholesale price (2020-2023) $ per mt D = discarded catch R = retained catch T=total catch
R % of T = retained catch as a % of total catch

Table 3-9 HAL C/P average first wholesale value ($M), average first wholesale gross price ($) per mt, discarded catch (mt), retained catch (mt) and total catch (mt) from 2020 through 2023 by FMP area and groundfish species

			2020				2021				2022				2023			
FMP Area/Species	FWV ($M)	P ($ per MT)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)
BSAI	**$145.22**	**$1,567**	**11,921**	**85,080**	**87.7%**	**97,000**	**9,255**	**68,416**	**88.1%**	**77,672**	**15,860**	**85,493**	**84.4%**	**101,354**	**12,687**	**81,914**	**86.6%**	**94,601**
Arrowtooth Flounder	$0.06	$167	232	158	40.5%	390	203	15	6.8%	218	341	16	4.6%	357	383	53	12.1%	435
Atka Mackerel	$0.01	$262	12	17	60.2%	29	46	1	1.3%	47	15		0.0%	15	3		0.0%	3
BSAI Alaska Plaice	$0.00	$4	0		0.0%	0	0		0.0%	0	1	0	1.2%	1	0		0.0%	0
BSAI Kamchatka Flounder	$0.01	$104	45	12	21.5%	57	67	1	1.4%	68	66	1	1.0%	66	41	7	15.2%	49
BSAI Other Flatfish	$0.00	$27	64	12	15.5%	76	119	6	4.8%	125	39	4	9.3%	43	45	0	0.1%	45
BSAI Shortraker Rockfish	$0.00	$223	3	8	72.4%	11	24	12	34.2%	36	2	0	3.0%	2	3	0	1.3%	3
BSAI Skate	$4.93	$281	6,816	6,571	49.1%	13,388	6,517	6,240	48.9%	12,757	12,273	10,902	47.0%	23,175	9,687	11,251	53.7%	20,938
Flathead Sole	$0.00	$3	480	2	0.4%	481	241	4	1.5%	245	431	0	0.0%	431	385	0	0.0%	385
Greenland Turbot	$0.27	$3,248	12	278	95.9%	290	11	1	10.4%	12	14	0	2.3%	14	18	2	11.5%	20
Northern Rockfish	$0.00	$42	43	12	22.2%	56	67	0	0.2%	67	30		0.0%	30	24	1	3.9%	25
Octopus	$0.00	$46	18	3	15.6%	21	17	1	7.2%	18	20	0	1.1%	20	10	1	11.5%	11
Other Rockfish	$0.00	$54	44	10	18.7%	55	50	9	15.3%	59	63	0	0.1%	63	26	0	0.1%	26
Pacific Cod	$134.84	$1,980	969	73,579	98.7%	74,549	896	58,972	98.5%	59,868	1,010	70,434	98.6%	71,444	926	65,571	98.6%	66,497
Pacific Ocean Perch	$0.00	$42	1	0	13.0%	2	3	0	0.3%	3	1		0.0%	1	2	0	7.8%	2
Pollock	$4.97	$1,048	524	4,323	89.2%	4,847	482	3,075	86.4%	3,557	702	4,129	85.5%	4,831	704	5,026	87.7%	5,730
Rock Sole	$0.00	$3	14	0	0.1%	14	10	0	1.6%	10	13	0	0.1%	13	7	0	0.0%	7
Rougheye Rockfish	$0.00	$24	67	2	2.8%	69	42	3	5.7%	45	37	2	4.1%	39	4	0	0.6%	4
Sablefish	$0.11	$659	161	65	28.7%	226	75	66	46.7%	141	156	4	2.7%	160	119	1	1.0%	120
Sculpin	$0.00	$0	1,953		0.0%	1,953												
Shark	$0.00	$0	20		0.0%	20	27		0.0%	27	25		0.0%	25	18		0.0%	18
Yellowfin Sole	$0.01	$17	443	27	5.7%	469	358	11	2.9%	369	622	0	0.0%	622	283		0.0%	283
GOA	**$4.72**	**$2,159**	**35**	**323**	**90.2%**	**358**	**526**	**1,831**	**77.7%**	**2,356**	**556**	**2,605**	**82.4%**	**3,161**	**501**	**2,372**	**82.6%**	**2,872**
Arrowtooth Flounder	$0.00	$35	7	4	35.1%	11	13		0.0%	13	22		0.0%	22	21		0.0%	21
Atka Mackerel	$0.00	$0					0		0.0%	0	0		0.0%	0	0		0.0%	0
GOA Skate	$0.03	$184	6		0.0%	6	166	18	10.0%	184	130	96	42.5%	226	142	43	23.4%	185
Flathead Sole	$0.00	$0					9		0.0%	9	2		0.0%	2	4		0.0%	4
GOA Deep Water Flatfish	$0.00	$0	0		0.0%	0	1		0.0%	1	1		0.0%	1	0		0.0%	0
GOA Demersal Shelf Rockfish	$0.00	$36	0		0.0%	0	1	0	6.5%	1	0		0.0%	0				
GOA Dusky Rockfish	$0.00	$368	0		0.0%	0	1		0.0%	1	0	1	71.0%	1	1	1	53.8%	2
GOA Rex Sole	$0.00	$0					0		0.0%	0	0		0.0%	0	0		0.0%	0
GOA Shallow Water Flatfish	$0.00	$0	0		0.0%	0	2		0.0%	2	3		0.0%	3	4		0.0%	4
GOA Skate, Big	$0.02	$273	5		0.0%	5	64	19	22.7%	82	62	33	34.9%	95	73	68	48.1%	141
GOA Skate, Longnose	$0.01	$304	2	5	73.1%	6	28	2	8.0%	31	68	13	16.3%	81	39	38	49.2%	77
GOA Thornyhead Rockfish	$0.03	$2,407	1	14	91.5%	15	1	8	88.3%	9	1	5	84.5%	6	7	9	55.7%	16
Northern Rockfish	$0.00	$145					1		0.0%	1	0	0	63.3%	1	3	0	8.7%	3
Octopus	$0.00	$30	0		0.0%	0	1		0.0%	1	6		0.0%	6	15	1	6.8%	17
Other Rockfish	$0.00	$128	0		0.0%	0	17		0.0%	17	53	1	1.8%	54	42	23	35.4%	65
Pacific Cod	$3.36	$2,367	0	4	99.9%	4	19	1,498	98.7%	1,517	35	2,192	98.4%	2,227	31	1,901	98.4%	1,932
Pacific Ocean Perch	$0.00	$0					0		0.0%	0	0		0.0%	0	0		0.0%	0
Pollock	$0.01	$502					1	7	91.0%	8	4	22	86.3%	26	4	23	85.9%	26
Rougheye Rockfish	$0.00	$79	0	0	53.8%	1	39	2	5.7%	41	18	2	10.4%	20	1	3	74.7%	3
Sablefish	$1.24	$4,131	5	289	98.4%	294	13	269	95.2%	282	92	233	71.6%	325	46	258	84.9%	304
Shark	$0.00	$0	4		0.0%	4	77		0.0%	77	40		0.0%	40	66		0.0%	66
Shortraker Rockfish	$0.01	$302	5	7	59.9%	12	73	7	8.8%	80	17	7	27.8%	24	1	4	72.7%	5

Source: AKFIN; Source file: MRA_Overview (1-6-25).
FWV = Average first wholesale value (2000-2023) in millions of $ P = Average first wholesale price (2020-2023) $ per mt D = discarded catch R = retained catch T=total catch
R % of T = retained catch as a % of total catch

Table 3-10 HAL CV average exvessel value ($), average exvessel price ($) per mt, discarded catch (mt), retained catch (mt) and total catch (mt) from 2020 through 2023 by FMP area and groundfish species

			2020				2021				2022				2023			
FMP Area/Species	EV ($M)	P ($ per MT)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)
BSAI	**$0.61**	**$1,342**	**237**	**759**	**76.2%**	**996**	**62**	**222**	**78.2%**	**283**	**15**	**204**	**93.2%**	**219**	**173**	**140**	**44.7%**	**313**
Arrowtooth Flounder	$0.00	$4	28	0	0.0%	28	1	0	0.0%	1	0	0	0.0%	0	0	0	68.9%	0
Atka Mackerel	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
BSAI Alaska Plaice	$0.00	$33	0	0	99.9%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
BSAI Kamchatka Flounder	$0.00	$2	11	0	0.0%	11	0	0	0.0%	0	0	0	0.0%	0	0	0	86.9%	0
BSAI Other Flatfish	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
BSAI Shortraker Rockfish	$0.00	$82	1	0	0.0%	1	0	0	99.8%	0	1	1	47.7%	2	0	0	99.3%	0
BSAI Skate	$0.00	$0	90	0	0.0%	90	56	0	0.0%	56	6	0	0.0%	6	145	0	0.0%	145
Flathead Sole	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
Greenland Turbot	$0.00	$1	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	5	0	3.3%	6
Northern Rockfish	$0.00	$14	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	97.3%	0
Octopus	$0.00	$3	1	0	1.6%	1	0	0	6.1%	0	0	0	0.0%	0	19	0	0.0%	19
Other Rockfish	$0.00	$172	21	2	7.4%	22	0	1	96.9%	1	0	2	92.6%	2	3	1	31.2%	4
Pacific Cod	$0.22	$918	16	725	97.8%	742	1	155	99.4%	156	1	77	98.8%	78	0	3	86.1%	3
Pacific Ocean Perch	$0.00	$32	0	0	81.4%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	100.0%	0
Pollock	$0.00	$15	0	0	50.3%	0	0	0	51.9%	0	0	0	0.0%	0	0	0	0.0%	0
Rock Sole	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
Rougheye Rockfish	$0.00	$218	0	0	40.8%	1	0	0	75.5%	0	0	0	94.7%	0	0	1	99.9%	1
Sablefish	$0.38	$4,070	12	32	73.4%	43	4	64	94.7%	67	5	124	96.1%	130	0	134	99.9%	134
Sculpin	$0.00	$0	56	0	0.0%	56	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
Shark	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
Yellowfin Sole	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
GOA	$21.33	**$3,436**	**1,073**	**4,744**	**81.6%**	**5,817**	**1,383**	**5,288**	**79.3%**	**6,671**	**1,392**	**5,485**	**79.8%**	**6,876**	**1,215**	**4,252**	**77.8%**	**5,467**
Arrowtooth Flounder	$0.00	$1	59	0	0.1%	59	48	1	1.5%	48	34	0	0.7%	34	33	0	0.1%	33
Atka Mackerel	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
GOA Skate	$0.00	$2	168	0	0.0%	168	155	0	0.0%	155	229	0	0.2%	229	105	1	1.4%	106
Flathead Sole	$0.00	$0	0	0	0.0%	0	1	0	0.0%	1	0	0	0.0%	0	0	0	0.0%	0
GOA Deep Water Flatfish	$0.00	$0	1	0	0.1%	1	1	0	0.0%	1	4	0	0.0%	4	3	0	0.1%	3
GOA Demersal Shelf Rockfish	$0.04	$2,305	1	10	90.5%	11	2	17	91.6%	19	2	21	91.7%	23	1	16	96.4%	17
GOA Dusky Rockfish	$0.00	$408	0	0	62.1%	1	0	2	81.0%	2	0	0	98.4%	0	0	0	92.7%	0
GOA Rex Sole	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
GOA Shallow Water Flatfish	$0.00	$0	1	0	0.0%	1	1	0	0.0%	1	12	0	0.0%	12	3	0	0.0%	3
GOA Skate, Big	$0.02	$114	26	0	0.7%	26	104	27	20.8%	132	210	34	14.0%	244	244	29	10.6%	273
GOA Skate, Longnose	$0.02	$108	58	3	5.1%	61	174	42	19.4%	216	273	38	12.2%	310	218	29	11.9%	247
GOA Thornyhead Rockfish	$0.16	$1,518	16	197	92.3%	214	8	91	92.2%	99	3	56	94.3%	59	3	37	93.4%	39
Northern Rockfish	$0.00	$13	0	0	0.0%	0	0	0	0.0%	0	0	0	16.6%	0	0	0	0.0%	0
Octopus	$0.00	$27	0	0	0.0%	0	1	0	4.5%	1	2	0	6.0%	2	6	0	0.9%	6
Other Rockfish	$0.02	$516	11	12	51.4%	23	22	24	52.2%	46	17	22	55.9%	39	12	19	60.3%	31
Pacific Cod	$1.42	$906	1	2	65.5%	3	28	1,784	98.5%	1,811	48	2,476	98.1%	2,523	45	1,872	97.7%	1,917
Pacific Ocean Perch	$0.00	$285	0	0	0.0%	0	0	0	100.0%	0	0		0.0%	0	0	0	0.0%	0
Pollock	$0.00	$112	0	0	5.9%	0	22	9	28.1%	30	7	7	51.5%	14	5	4	39.6%	9
Rougheye Rockfish	$0.06	$624	47	113	70.8%	159	13	74	84.9%	87	8	62	88.8%	70	9	59	87.4%	68
Sablefish	$19.55	$5,952	322	4,318	93.1%	4,640	221	3,162	93.5%	3,383	117	2,728	95.9%	2,845	129	2,140	94.3%	2,269
Sculpin	$0.00	$0	5	0	0.0%	5	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
Shark	$0.00	$0	230	0	0.0%	230	547	0	0.0%	547	417	0	0.1%	417	386	0	0.0%	386
Shortraker Rockfish	$0.05	$464	125	88	41.4%	213	35	56	61.9%	91	8	40	82.7%	48	14	45	75.8%	59

Source: AKFIN; Source file: MRA_Overview (1-6-25).
FWV = Average first wholesale value (2000-2023) in millions of $ P = Average first wholesale price (2020-2023) $ per mt D = discarded catch R = retained catch T=total catch
R % of T = retained catch as a % of total catch

Table 3-11 Pot vessels average exvessel price ($), discarded catch (mt), retained catch (mt) and total catch (mt) from 2020 through 2023 by FMP area and groundfish species

FMP Area/Species	EV ($M)	P ($ per MT)	2020				2021				2022				2023			
			D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)	D (mt)	R (mt)	R % of T	T (mt)
BSAI	**$28.02**	**$1,293**	**1,154**	**21,032**	**94.8%**	**22,186**	**631**	**16,053**	**96.2%**	**16,684**	**863**	**25,143**	**96.7%**	**26,006**	**294**	**21,526**	**98.7%**	**21,820**
Arrowtooth Flounder	$0.00	$0	18	0	0.1%	18	34	0	0.0%	34	53	0	0.4%	53	52	0	0.1%	52
Atka Mackerel	$0.00	$1	7	2	20.4%	8	10	0	3.8%	10	55	0	0.4%	55	6	1	7.9%	6
BSAI Alaska Plaice	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
BSAI Kamchatka Flounder	$0.00	$0	8	0	0.0%	8	4	0	0.0%	4	15	0	0.0%	15	22	0	0.0%	22
BSAI Other Flatfish	$0.00	$0	39	1	1.4%	40	17	0	2.2%	17	300	0	0.0%	300	7	0	0.1%	7
BSAI Shortraker Rockfish	$0.00	$19	0	0	0.0%	0	0	0	11.2%	0	1	0	12.5%	2	0	0	9.7%	0
BSAI Skate and GOA Skate, Other	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	1.6%	0
Flathead Sole	$0.00	$33	0	3	93.6%	3	0	11	98.5%	11	0	23	99.2%	24	0	15	99.2%	15
Greenland Turbot	$0.00	$1	1	0	2.6%	1	2	0	0.0%	2	6	0	0.6%	6	16	0	2.6%	16
Northern Rockfish	$0.00	$0	1	0	0.0%	1	0	0	0.0%	0	6	0	0.0%	6	0	0	20.6%	0
Octopus	$0.09	$338	515	135	20.8%	650	117	19	14.1%	136	131	71	35.2%	202	40	63	61.6%	103
Other Rockfish	$0.00	$64	13	1	4.6%	14	7	0	0.2%	7	7	0	3.8%	7	2	0	8.0%	2
Pacific Cod	$17.09	$931	33	19,926	99.8%	19,960	17	14,149	99.9%	14,166	44	21,267	99.8%	21,311	16	18,019	99.9%	18,035
Pacific Ocean Perch	$0.00	$143	0	0	1.3%	0	0	0	80.6%	0	0	0	91.5%	0	0	0	66.7%	0
Pollock	$0.00	$23	14	2	14.6%	17	4	1	22.8%	5	10	7	40.7%	16	13	10	43.6%	23
Rock Sole	$0.00	$13	1	0	33.1%	1	0	0	59.1%	0	0	0	66.8%	0	0	0	6.1%	0
Rougheye Rockfish	$0.00	$108	2	1	33.0%	2	0	0	0.0%	0	1	0	2.8%	1	1	0	17.5%	1
Sablefish	$10.83	$4,270	32	941	96.7%	973	50	1,871	97.4%	1,921	55	3,774	98.6%	3,829	8	3,417	99.8%	3,425
Sculpin	$0.00	$1	277	7	2.5%	284	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
Shark	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	2	0	0.0%	2	0	0	0.0%	0
Yellowfin Sole	$0.00	$1	194	13	6.2%	207	370	1	0.1%	370	175	0	0.1%	175	110	0	0.2%	110
GOA	**$55.60**	**$4,144**	**369**	**4,578**	**92.5%**	**4,947**	**512**	**13,040**	**96.2%**	**13,552**	**489**	**18,403**	**97.4%**	**18,892**	**360**	**15,920**	**97.8%**	**16,280**
Arrowtooth Flounder	$0.00	$0	197	0	0.0%	197	243	0	0.1%	243	232	1	0.4%	233	147	0	0.3%	147
GOA Skates	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
Flathead Sole	$0.00	$1	0	0	0.0%	0	0	0	0.0%	0	1	0	0.0%	1	2	0	0.0%	2
GOA Deep Water Flatfish	$0.00	$0	8	0	0.0%	8	8	0	0.0%	8	11	0	0.0%	11	9	0	0.0%	9
GOA Demersal Shelf Rockfish	$0.00	$2,311	0	1	100.0%	1	0	1	99.9%	1	0	1	100.0%	1	0	3	100.0%	3
GOA Dusky Rockfish	$0.00	$22	0	0	100.0%	0	1	0	15.4%	1	2	0	1.6%	2	0	0	5.2%	0
GOA Rex Sole	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
GOA Shallow Water Flatfish	$0.00	$0	6	0	0.0%	6	10	0	0.0%	10	3	0	0.6%	3	7	0	0.0%	7
GOA Skate, Big	$0.00	$0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
GOA Skate, Longnose	$0.00	$660	0	0	100.0%	0	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
GOA Thornyhead Rockfish	$0.01	$1,263	1	6	88.8%	7	1	6	84.2%	7	2	5	75.6%	7	1	5	77.7%	6
Northern Rockfish	$0.00	$0	0	0	0.0%	0	1	0	0.0%	1	0	0	0.0%	0	0	0	0.0%	0
Octopus	$0.04	$622	2	12	85.5%	14	14	23	62.7%	37	43	60	58.3%	103	56	40	41.7%	96
Other Rockfish	$0.00	$671	1	2	72.0%	2	5	1	18.8%	6	1	5	89.0%	6	1	6	90.8%	6
Pacific Cod	$2.79	$899	14	7	33.1%	21	10	3,417	99.7%	3,427	28	4,882	99.4%	4,910	26	4,041	99.4%	4,067
Pacific Ocean Perch	$0.00	$4	0	0	0.0%	0	0	0	0.0%	0	1	0	0.0%	1	0	0	0.0%	0
Pollock	$0.00	$299	0	0	100.0%	0	0	2	87.1%	2	2	1	46.7%	3	1	1	46.4%	2
Rougheye Rockfish	$0.02	$654	1	9	93.8%	10	10	20	65.7%	30	2	32	93.8%	34	1	38	97.4%	39
Sablefish	$52.73	$5,292	136	4,534	97.1%	4,670	193	9,564	98.0%	9,756	156	13,405	98.9%	13,561	89	11,778	99.2%	11,867
Sculpin	$0.00	$10	0	0	29.7%	1	0	0	0.0%	0	0	0	0.0%	0	0	0	0.0%	0
Shark	$0.00	$0	2		0.0%	2	11	0	0.0%	11	4	0	0.0%	4	18	0	0.0%	18
Shortraker Rockfish	$0.01	$557	2	6	74.8%	8	4	6	61.9%	10	2	10	82.2%	12	1	9	87.1%	10

Source: AKFIN; Source file: MRA_Overview (1-6-25).
FWV = Average first wholesale value (2000-2023) in millions of $ P = Average first wholesale price (2020-2023) $ per mt D = discarded catch R = retained catch T=total catch
R % of T = retained catch as a % of total catch

3.4.2 Discarded Incidental Catch Target/Species Tables

One of the purposes of the current instantaneous MRA accounting requirement is to limit the amount of indirect targeting of highly valued incidental species. The proportions that constitute many MRAs were designed to reflect the upper end of expected incidental catch rates. The NMFS series catch reporting system assigns all groundfish catch as "incidental" or "target" designation. This estimate is generated by an algorithm that assigns a target fishery designation to each haul made by a C/P and delivery made by a CV based on the predominant species. The only exception to the algorithm is for pollock, which is assigned based on gear type. Table 3-12 through Table 3-17 shows the average amount of discarded incidental catch of groundfish during the 2020 through 2024 period by targets in the BSAI for each sector. Table 3-18 through Table 3-22 show the same information but for the GOA.

Table 3-12 Average discarded catch of groundfish in the BSAI by target for A80 sector (2020-2024)

	Target fishery													
Species	*Alaska Plaice*	*Arrowtooth Flounder*	*Atka Mackerel*	*Flathead Sole*	*Greenland Turbot*	*Kamchatka Flounder*	*Other Flatfish*	*Pacific Cod*	*Pollock*	*Rock Sole*	*Rockfish*	*Sablefish*	*Yellowfin Sole*	***Species Total***
Alaska Plaice	4	0	0	18	0	0	0	0	2	98	0	0	518	641
Arrowtooth Flounder	0	77	28	76	2	22	6	2	8	19	94	4	153	491
Atka Mackerel	0	1	471	0	0	13	0	0	1	0	109	0	0	597
Flathead Sole	0	15	3	67	3	2	1	2	6	16	20	3	66	203
Greenland Turbot	0	2	1	2	4	13	0	0	1	0	5	1	2	33
Kamchatka Flounder	0	15	15	7	2	51	2	0	2	2	30	4	10	139
Other Flatfish	13	7	5	5	1	6	3	52	13	402	39	8	759	1,314
Pacific Cod	2	3	22	25	0	1	0	26	4	74	9	0	131	298
Pollock	103	97	128	1,419	8	81	9	77	282	2,464	564	16	5,828	11,074
Rock Sole	4	2	22	24	0	1	0	28	6	166	20	0	299	573
Pacific Ocean Perch	0	57	239	86	16	21	39	2	13	0	300	7	3	783
Sablefish	0	185	31	64	70	162	62	1	30	0	132	26	0	763
Yellowfin Sole	2	0	0	32	0	0	0	1	6	107	0	0	974	1,123
Northern Rockfish	0	3	381	1	0	1	1	2	1	0	142	0	0	531
Octopus	0	1	1	2	0	0	1	0	0	0	2	0	0	8
Other Rockfish	0	14	149	20	13	11	9	1	2	0	132	25	0	376
Rougheye Rockfish	0	6	44	1	0	12	1	0	0	0	121	1	0	187
Sculpin	2	20	52	35	4	6	1	2	11	49	34	0	227	444
Shark	0	2	4	2	1	10	0	0	0	0	5	0	2	27
Shortraker Rockfish	0	11	5	4	3	3	3	0	0	0	16	1	0	47
Skate	18	159	222	338	18	128	9	13	42	166	132	19	1,433	2,699
Total	**150**	**677**	**1,826**	**2,229**	**146**	**545**	**147**	**210**	**430**	**3,563**	**1,906**	**117**	**10,405**	**22,352**

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

Table 3-13 Average discarded catch of groundfish in the BSAI by target for AFA C/P sector (2020-2024)

	Target fisheries										
Species	*Alaska Plaice*	*Arrowtooth Flounder*	*Atka Mackerel*	*Flathead Sole*	*Other Flatfish*	*Pacific Cod*	*Pollock*	*Rock Sole*	*Rockfish*	*Yellowfin Sole*	*Total*
Alaska Plaice	1	0	0	0	0	1	1	27	0	255	285
Arrowtooth Flounder	0	0	2	1	0	2	15	1	0	32	52
Atka Mackerel	0	0	20	0	0	0	2	0	2	0	24
Flathead Sole	0	0	0	1	0	4	108	4	0	19	136
Other Flatfish	1	0	0	0	0	41	14	30	0	100	186
Pacific Cod	1	0	3	0	0	2	482	16	0	55	559
Pollock	1	0	5	55	0	23	461	304	6	729	1,584
Rock Sole	0	0	1	0	0	26	69	25	0	87	209
Pacific Ocean Perch	0	0	12	0	0	0	448	0	8	0	469
Yellowfin Sole	0	0	0	0	0	2	60	9	0	97	168
Greenland Turbot	0	0	0	0	0	0	1	0	0	0	2
Kamchatka Flounder	0	0	1	0	0	0	2	0	0	3	6
Northern Rockfish	0	0	65	0	0	0	17	0	24	0	106
Octopus	0	0	0	0	0	0	0	0	0	0	0
Other Rockfish	0	0	5	0	0	0	2	0	1	0	7
Rougheye Rockfish	0	0	5	0	0	0	0	0	2	0	7
Sablefish	0	0	0	0	0	0	11	0	0	0	12
Sculpin	0	0	1	0	0	0	4	2	1	28	37
Shark	0	0	0	0	0	0	41	0	0	0	42
Shortraker Rockfish	0	0	1	0	0	0	3	0	0	0	4
Skate	0	0	8	13	0	10	181	9	1	151	372
Total	**5**	**0**	**129**	**70**	**0**	**112**	**1,921**	**427**	**45**	**1,558**	**4,268**

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

Table 3-14 Average discarded catch (mt) of groundfish in the BSAI by target for the trawl CV sector (2020-2024)

	Target fishery								
Species	Alaska Plaice	Atka Mackerel	Flathead Sole	Pacific Cod	Pollock	Rock Sole	Rockfish	Yellowfin Sole	Total
Alaska Plaice	0	0	1	3	1	3	0	95	102
Atka Mackerel	0	44	0	14	34	0	17	0	109
Flathead Sole	0	0	6	42	51	0	2	19	120
Pacific Cod	0	11	5	55	27	12	1	24	134
Pollock	5	16	9	265	663	59	90	338	1,445
Rock Sole	0	3	1	101	21	10	2	49	189
Pacific Ocean Perch	0	17	0	0	198	0	19	0	235
Yellowfin Sole	0	0	1	4	5	10	0	85	105
Arrowtooth Flounder	0	2	0	69	7	0	14	13	106
Greenland Turbot	0	1	0	2	0	0	1	0	4
Kamchatka Flounder	0	1	0	4	1	0	7	0	13
Northern Rockfish	0	24	0	0	3	0	6	0	34
Octopus	0	0	0	0	0	0	0	0	1
Other Flatfish	1	1	0	67	11	9	2	71	161
Other Rockfish	0	10	0	1	1	0	7	0	18
Rougheye Rockfish	0	2	0	0	0	0	8	0	10
Sablefish	0	6	0	7	537	0	3	0	553
Sculpin	0	7	0	12	2	7	2	35	65
Shark	0	0	0	0	100	0	1	0	101
Shortraker Rockfish	0	0	0	0	0	0	1	0	1
Skate	0	16	4	113	52	2	9	66	263
Total	**6**	**162**	**27**	**760**	**1,715**	**111**	**193**	**795**	**3,770**

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

Table 3-15 Average discarded catch (mt) of groundfish in the BSAI by target for the HAL C/P sector (2020-2024)

	Target fishery					
Species	Greenland Turbot	Pacific Cod	Pollock	Rockfish	Sablefish	Total
Greenland Turbot	0	13	0	0	0	13
Pacific Cod	0	970	0	0	0	970
Pollock	0	571	0	0	0	571
Pacific Ocean Perch	0	2	0	0	0	2
Sablefish	8	132	0	0	0	140
Alaska Plaice	0	0	0	0	0	0
Arrowtooth Flounder	1	387	0	0	0	389
Atka Mackerel	0	16	0	0	0	16
Flathead Sole	0	418	0	0	0	420
Kamchatka Flounder	0	54	0	0	0	54
Northern Rockfish	0	42	0	0	0	42
Octopus	0	18	0	0	0	18
Other Flatfish	1	64	0	0	0	65
Other Rockfish	0	45	0	0	0	45
Rock Sole	0	13	0	0	0	13
Rougheye Rockfish	0	34	0	0	0	34
Sculpin	0	391	0	0	0	391
Shark	0	21	0	0	0	21
Shortraker Rockfish	0	6	0	0	0	7
Skate	8	9,211	0	0	4	9,231
Yellowfin Sole	0	458	0	0	0	460
Total	**19**	**12,865**	**0**	**1**	**5**	**12,904**

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

Table 3-16 Average discarded catch (mt) of groundfish in the BSAI by target for the HAL CV sector (2020-2024)

	Target fishery		
Species	Pacific Cod	Sablefish	Total
Pacific Cod	4	1	4
Sablefish	4	0	4
Arrowtooth Flounder	6	0	6
Atka Mackerel	0	0	0
BSAI Alaska Plaice	0	0	0
BSAI Kamchatka Flounder	2	0	2
BSAI Other Flatfish	0	0	0
BSAI Shortraker Rockfish	0	0	0
BSAI Skate	31	30	61
Flathead Sole	0	0	0
Greenland Turbot	0	1	1
Halibut	1	30	31
Northern Rockfish	0	0	0
Octopus	0	4	4
Other Rockfish	4	1	5
Pacific Ocean Perch	0	0	0
Pollock	0	0	0
Rock Sole	0	0	0
Rougheye Rockfish	0	0	0
Sculpin	11	0	11
Shark	0	0	0
Yellowfin Sole	0	0	0
Total	**65**	**68**	**132**

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

Table 3-17 Average discarded catch (mt) of groundfish in the BSAI by target for the pot sector (2020-2024)

	Target fishery			
Species	*Pacific Cod*	*Rockfish*	*Sablefish*	*Total*
Pacific Cod	26	0	2	29
Pacific Ocean Perch	0	0	0	0
Sablefish	18	0	15	33
Arrowtooth Flounder	4	0	36	40
Atka Mackerel	16	0	0	16
BSAI Alaska Plaice	0	0	0	0
BSAI Kamchatka Flounder	0	0	10	10
BSAI Other Flatfish	73	0	0	73
BSAI Shortraker Rockfish	0	0	0	0
BSAI Skate	0	0	0	0
Flathead Sole	0	0	0	0
Greenland Turbot	0	0	5	5
Halibut	0	0	0	0
Northern Rockfish	2	0	0	2
Octopus	175	0	0	175
Other Rockfish	5	0	1	6
Pollock	9	0	0	10
Rock Sole	0	0	0	0
Rougheye Rockfish	0	0	1	1
Sculpin	55	0	0	55
Shark	0	0	1	1
Yellowfin Sole	171	0	0	171
Total	**556**	**0**	**72**	628

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

Table 3-18 Average discarded catch (mt) of groundfish in the GOA by target for the A80 sector (2020-2024)

	Target fishery						
Species	*Arrowtooth Flounder*	*Flathead Sole*	*Pollock*	*Rex Sole - GOA*	*Shallow Water Flatfish - GOA*	*Rockfish*	***Species total***
Arrowtooth Flounder	229	1	1	39	90	158	**517**
Flathead Sole	36	0	0	1	7	20	**64**
Pollock	110	11	42	1	38	226	**428**
GOA Rex Sole	11	0	0	7	2	11	**32**
GOA Shallow Water Flatfish	15	0	0	2	100	13	**130**
Pacific Ocean Perch	299	0	0	36	23	201	**560**
Atka Mackerel	3	0	0	0	1	56	**59**
GOA Deep Water Flatfish	30	0	0	2	3	12	**47**
GOA Dusky Rockfish	23	0	0	0	1	34	**58**
GOA Skate	16	0	0	1	2	12	**31**
GOA Skate, Big	10	0	0	0	3	2	**14**
GOA Skate, Longnose	10	0	0	0	2	20	**31**
GOA Thornyhead Rockfish	1	0	0	1	0	6	**8**
Northern Rockfish	20	0	0	0	0	16	**37**
Octopus	1	0	0	0	5	1	**7**
Other Rockfish	10	0	0	0	1	232	**243**
Pacific Cod	211	1	1	3	124	180	**521**
Rougheye Rockfish	2	0	0	0	0	11	**13**
Sablefish	221	0	0	13	36	82	**353**
Sculpin	2	0	0	0	32	5	**39**
Shark	38	0	0	2	8	9	**58**
Shortraker Rockfish	2	0	0	0	0	5	**7**
Target total	**1,298**	**13**	44	**111**	**477**	**1,311**	**3,255**

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

Table 3-19 Average discarded catch (mt) of groundfish in the GOA by target for the trawl CV sector (2020-2024)

	Target fishery						
Species	*Arrowtooth Flounder*	*Pacific Cod*	*Pollock*	*Sablefish*	*Shallow Water Flatfish - GOA*	*Rockfish*	***Species total***
Arrowtooth Flounder	17	68	167	158	46	58	**515**
Pacific Cod	73	12	92	1	67	2	**247**
Pollock	34	114	536	26	8	121	**838**
Sablefish	30	1	170	0	1	0	**203**
GOA Shallow Water Flatfish	2	31	333	2	7	2	**377**
Pacific Ocean Perch	13	1	311	1	1	20	**348**
Atka Mackerel	0	1	0	0	0	0	**1**
Flathead Sole	1	11	6	4	0	3	**24**
GOA Deep Water Flatfish	0	2	1	5	0	4	**11**
GOA Dusky Rockfish	0	0	4	0	0	2	**6**
GOA Rex Sole	0	4	4	4	0	3	**16**
GOA Skate	6	1	4	2	1	1	**15**
GOA Skate, Big	13	19	5	0	3	0	**42**
GOA Skate, Longnose	6	1	4	0	2	2	**14**
GOA Thornyhead Rockfish	0	0	0	3	0	2	**5**
Northern Rockfish	0	0	0	0	0	0	**1**
Octopus	5	0	0	0	0	0	**5**
Other Rockfish	0	0	7	0	0	2	**9**
Rougheye Rockfish	3	0	3	5	0	1	**11**
Sculpin	1	0	9	0	29	1	**39**
Shark	9	4	96	3	3	9	**124**
Shortraker Rockfish	0	1	12	7	0	10	**31**
Target total	**213**	**272**	**1,766**	**221**	**169**	**242**	**2,883**

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

Table 3-20 Average discarded catch (mt) of groundfish in the GOA by target for the HAL C/P sector (2020-2024)

	Target fishery		
Speceis	*Pacific Cod*	*Sablefish*	***Species total***
Pacific Cod	23	0	**24**
Sablefish	31	6	**37**
Arrowtooth Flounder	13	4	**17**
Atka Mackerel	0	0	**0**
GOA Skate	116	7	**123**
Flathead Sole	3	0	**3**
GOA Deep Water Flatfish	0	0	**0**
GOA Demersal Shelf Rockfish	0	0	**0**
GOA Dusky Rockfish	1	0	**1**
GOA Rex Sole	0	0	**0**
GOA Shallow Water Flatfish	3	0	**3**
GOA Skate, Big	39	3	**45**
GOA Skate, Longnose	27	9	**36**
GOA Thornyhead Rockfish	2	1	**3**
Halibut	0	2	**2**
Northern Rockfish	1	0	**1**
Octopus	6	0	**6**
Other Rockfish	25	2	**27**
Pacific Ocean Perch	0	0	**0**
Pollock	2	0	**2**
Rougheye Rockfish	1	12	**13**
Shark	21	18	**39**
Shortraker Rockfish	0	20	**20**
Target total	**316**	**84**	**403**

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

Table 3-21 Average discarded catch (mt) of groundfish in the GOA by target for the HAL CV sector (2020-2024)

	Target fishery				
Species	*Arrowtooth Flounder*	*Pacific Cod*	*Sablefish*	*Rockfish*	***Species total***
Arrowtooth Flounder	0	14	27	0	**41**
Pacific Cod	0	34	4	1	**40**
Sablefish	0	16	151	0	**167**
Pacific Ocean Perch	0	0	0	0	**0**
Atka Mackerel	0	0	0	0	**0**
Flathead Sole	0	0	0	0	**0**
GOA Deep Water Flatfish	0	0	2	0	**2**
GOA Demersal Shelf Rockfish	0	0	1	0	**1**
GOA Dusky Rockfish	0	0	0	0	**0**
GOA Rex Sole	0	0	0	0	**0**
GOA Shallow Water Flatfish	0	3	1	0	**4**
GOA Skate	0	76	66	0	**142**
GOA Skate, Big	0	110	21	0	**131**
GOA Skate, Longnose	0	77	95	0	**172**
GOA Thornyhead Rockfish	0	0	6	0	**6**
Northern Rockfish	0	0	0	0	**0**
Octopus	0	2	1	0	**3**
Other Rockfish	0	3	12	0	**14**
Pollock	0	7	0	0	**7**
Rougheye Rockfish	0	0	15	0	**15**
Sculpin	0	1	0	0	**1**
Shark	0	49	305	2	**356**
Shortraker Rockfish	0	0	36	0	**37**
Target total	**0**	**390**	**743**	**5**	**1,138**

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

Table 3-22 Average discarded catch (mt) of groundfish in the GOA by target for the pot sector (2020-2024)

	Target fishery				
Species	*Pacific Cod*	*Pollock*	*Sablefish*	*Rockfish*	*Species total*
Pacific Cod	13	0	5	0	18
Pollock	1	0	0	0	1
Sablefish	4	0	125	0	129
Pacific Ocean Perch	0	0	0	0	0
Arrowtooth Flounder	10	0	165	0	174
Flathead Sole	1	0	0	0	1
GOA Deep Water Flatfish	0	0	9	0	9
GOA Demersal Shelf Rockfish	0	0	0	0	0
GOA Dusky Rockfish	1	0	0	0	1
GOA Rex Sole	0	0	0	0	0
GOA Shallow Water Flatfish	3	0	3	0	5
GOA Skate	0	0	0	0	0
GOA Skate, Big	0	0	0	0	0
GOA Skate, Longnose	0	0	0	0	0
GOA Thornyhead Rockfish	0	0	1	0	1
Northern Rockfish	0	0	0	0	0
Octopus	27	0	2	0	29
Other Rockfish	1	0	1	0	2
Rougheye Rockfish	0	0	3	0	3
Sculpin	0	0	0	0	0
Shark	1	0	7	0	8
Shortraker Rockfish	0	0	2	0	2
Target total	**61**	**0**	**323**	**0**	**384**

Source: AKFIN; source file MRA_Target(2-3-25)
Note: Species below the dotted line have no targeted catch volumes for this sector.

3.5 Target Products

The following section utilizes parts of the Stock Assessment and Fishery Evaluation Report for the Groundfish Fisheries of the Gulf of Alaska and Bering Sea / Aleutian Island Area: Economic Status of the Groundfish Fisheries Off Alaska, 2024 by the National Marine Fisheries Service (NMFS, 2024).
The commercial FMP groundfish fisheries off Alaska had a total catch of 2.03 million metric tons (mt) in 2023 (including catch in federal and state waters), an increase of 9 percent from 2022. Groundfish accounted for 83 percent of Alaska's 2023 total catch. Total catches of Alaska's FMP groundfish fisheries increased in 2023 for pollock, Atka mackerel, and rockfish species complexes and decreased for sablefish, Pacific cod, and flatfish species complexes.

The aggregate exvessel value of the FMP groundfish fisheries off Alaska was $858.65 million, which was 55 percent of the exvessel value of all commercial fisheries off Alaska in 2023. After adjustment for inflation, the real exvessel value of FMP groundfish decreased $136.73 million in 2023 and the aggregate real exvessel prices decreased 21 percent to $0.2 per pound. Nominal pollock exvessel prices decreased 16 percent to $0.15 per pound in the BSAI and 25 percent to $0.13 per pound in the GOA. Pacific cod nominal exvessel prices decreased 4 percent to $0.44 per pound in the BSAI, and 10 percent to $0.42 per pound in the GOA. Among the other species that are the focus of the shoreside exvessel fisheries: GOA flatfish exvessel prices decreased 19 percent, GOA rockfish prices decreased three percent, and GOA sablefish prices decreased 29 percent (in nominal terms).

The gross value of the 2023 groundfish catch after primary processing (first wholesale) was $2.56 billion, a decrease of five percent in real terms from 2022. This change was the combined effect of a 13 percent decrease in the real aggregate 2023 first wholesale price to $1.42 per pound which was offset by aggregate production volumes increasing eight percent to 820.1 thousand mt. In the BSAI, aggregate first wholesale value increased six percent and value was increasing for nearly all species including pollock, sablefish, rockfish, and flatfish. The average first wholesale price for all products, however, was decreasing for most species except for arrowtooth, Atka mackerel, and some rockfish and flatfish species. In the GOA, aggregate first wholesale value decreased (22 percent) with decreases in value for all species except some flatfish species. Prices were decreasing for most species with the exception of arrowtooth, Atka mackerel, and some flatfish species.

3.6 Markets

The following section utilizes parts of the Alaska Groundfish Wholesale Market Profiles prepared by McKinley Research, LLC in 2022, which is based primarily on 2020 harvest and market data available at the time. Content from this report is included in Chapter 8 of the Stock Assessment and Fishery Evaluation Report for the Groundfish Fisheries of the Gulf of Alaska and Bering Sea / Aleutian Island Area: Economic Status of the Groundfish Fisheries Off Alaska, 2024 by the National Marine Fisheries Service (NMFS, 2024).

Alaska groundfish fisheries are of particular global importance thanks to their production of whitefish; Alaska produces approximately 19 percent of the global marine wild-harvested whitefish annually. Whitefish generally refers to non-oily species such as cod, pollock, haddock, hake, whiting, and benthic flatfish, such as sole, plaice, flounder, and halibut. These species – primarily caught in wild fisheries – also compete in global seafood markets with notable aquaculture species such as tilapia, pangasius, and catfish. Though different perceptions of quality and price premiums exist for this range of species, they are all competitors and may be substituted for each other based on price and availability.

Alaska produces just a fraction of global whitefish production and is thus highly impacted by global macroeconomic trends, trade policies, and competing whitefish supply. In terms of supply, Russia (cod/pollock/flatfish), China (tilapia), Norway (cod), Japan (pollock/cod), New Zealand (hoki), and

Vietnam (pangasius) are the biggest competitors for Alaska's groundfish industry in terms of high-volume whitefish species. Other species such as Pacific ocean perch (POP), sablefish, and Atka mackerel have both defined export markets and limited competition where Alaska is the primary export supplier and generally accounts for a large percent of global supply. As a result, species substitution is less common in markets for these species with price driven by local demand dynamics, currency fluctuations, and Alaska harvest volume. Once almost exclusively dependent on the Japanese market, sablefish is now well-known and sought-after by chefs and discerning consumers around the globe, thanks in large part to its popularization in Japan fusion cuisine.

With an estimated 24 percent of Alaska groundfish production remaining in the U.S. in 2020 - and a great deal more processed in China and shipped back to the U.S. – the U.S. is the largest consumer market for Alaska groundfish. The domestic market share of the Alaska groundfish market has grown in recent years and is likely to remain steady or increase in coming years due to the U.S.-China trade conflict and the persistent strength of the U.S. dollar.

Export markets bought the remaining three-quarters of Alaska's total groundfish production in 2020, and an even larger percentage of surimi, roe, fish meal, and other groundfish products. China is the largest direct importer of Alaska groundfish, buying 23 percent of production volume in 2020. Most Alaska seafood exported to China is reprocessed in the country and then shipped on to final markets, mostly in the U.S., Europe, and Japan. China is especially important for the reprocessing of Alaska's flatfish: more than two-thirds of Alaska's flatfish production went to China in 2022. Europe was the next largest importer of Alaska seafood and is an especially important market for Alaska pollock fillets and Pacific cod. Japan is a key buyer of most of Alaska's groundfish products and is the largest buyer of Alaska's pollock surimi, pollock roe, sablefish, and Atka mackerel.

4 Management Considerations

The proposed changes listed in this section would likely have several management and enforcement impacts. Modifying trip triggers from five possible triggers to two triggers for C/Ps and motherships, would result in reducing the number of trips and MRA calculations C/Ps and motherships would need to track. If instantaneous MRAs stayed in place but the trip trigger changed from offload to offload, C/Ps and motherships would still need to calculate the MRAs daily to ensure no MRA is ever exceeded at any given time. However, instead of tracking multiple concurrent trips every day for these calculations, C/Ps and motherships would only need to track them by management program. Although instantaneous MRAs would still need to be calculated, this option would reduce the overall number of trips and MRA calculations a vessel would need to track and could result in a reduction of calculation errors. There would still be some species, like BSAI pollock, that would not have an instantaneous MRA, which may cause some confusion among the industry and maintain a level of management and enforcement complexity.

If instantaneous MRAs were no longer in place for any species, all vessels (C/Ps, motherships, and CVs) would no longer need to worry about tracking MRAs at any given time, and instead would only track MRAs by management program for the entirety of the fishing trip (offload to offload). This option would also result in reducing the number of trips and MRA calculations a vessel would need to track, and may reduce the risk of calculation errors. This may be particularly useful for catcher vessels, since the only weight to precisely determine an MRA calculation (and whether directed fishing is being exceeded) is at the end of the trip for these vessels. Additionally, this would be useful for large volume trawl fisheries, such as pollock, where catch is poured directly into refrigerated seawater tanks and is not sorted.

In addition, under Alternative 4 Option 2 no species would have an instantaneous MRA. If all species were treated the same, it would make the MRA regulations easier to understand and easier to enforce. This option would greatly simplify the MRA regulations. It should be noted, however, that it would likely exacerbate the issue described in Section 5.5 regarding trips abruptly ending due to mechanical or medical reasons (in absence of a new regulatory exemption). In other words, if industry behavior changes and regulatory discards do decrease, it is highly likely that MRA violations would be exacerbated when unforeseen circumstances result in a trip ending prematurely.

Either option might also reduce regulatory discards. However, changing the definition of a trip for C/Ps and motherships to offload to offload may also make it more difficult to enforce protection areas. The use of MRA is imprecise and hard to calculate. MRAs, whether applied instantaneously or offload-to-offload, are an inadequate tool for limiting harvests in protection areas. Other tools, such as limits inside critical habitat or prohibitions of fishing inside critical habitat, as two examples, may be more effective. Both of these issues are discussed further below.

4.1 Regulatory Discards

Changing the MRA application for some or all species from offload to offload instead of instantaneously may decrease, to some extent, regulatory discards if implemented. Other than IR/IU species, a vessel is not required to keep incidental amounts of a species. If a vessel does not want to retain a species due to low economic value, the vessel may discard all of that species. The vessel must want to retain the species for a change in MRAs to decrease discards. Currently MRAs for most species are applied instantaneously throughout the fishing trip. This can lead to daily regulatory discards as the vessel is constantly monitoring total catch of basis species for the fishing trip and discarding incidental species to ensure they are never over the MRA at any point in time. It is likely that more regulatory discarding occurs towards the beginning of the fishing trip because there are fewer basis species onboard the vessel at that time. However, if MRAs were not applied instantaneously, and instead applied offload to offload, then it is

possible that fewer regulatory discards would occur. It is also possible that fewer regulatory discards would occur if a fishing trip was redefined to have fewer ending triggers.

For example, a C/P hook-and-line vessel may be fishing for Pacific cod (the basis species) in the BSAI and harvest 10 mt on the first day of the fishing trip. On that same day, the vessel also catches 5 mt of skates. In the BSAI a vessel may keep skates up to 20 percent by weight of Pacific cod (Table 11 part 679 under "other species"). Because the vessel only has a total of 10 mt of Pacific cod onboard, in order to stay under the instantaneous MRA, the C/P must now discard 3 mt of skates. However, the C/P will likely continue to harvest Pacific cod until the vessel is full. If, for example, the C/P does not plan on coming to port until they have 200 mt of Pacific cod onboard, then the vessel could have retained all of the skates from the first day instead of discarding if the MRA was applied at the time of the offload instead of instantaneously.

If this same C/P hook-and-line vessel harvests fish for three weeks before coming to port to offload, then under current regulation the vessel has created at least three fishing trips (one for each weekly reporting period). In this example, the C/P hook-and-line vessel has harvested 100 mt of Pacific cod in the first weekly reporting period and 3 mt of skates. This week constitutes a fishing trip for the vessel. On the first day of the second week of fishing, the vessel again only harvests 10 mt of Pacific cod and 5 mt of skates. Again, the vessel is required to discard 3 mt of skates because the new fishing trip only has a total of 10 mt of Pacific cod. However, if the vessel did not trigger a new fishing trip on the first day of the second week of fishing, and therefore had been able to include the previous week's catch of 100 mt, then the vessel would not have had to discard any of the skates because there would be enough Pacific cod onboard the vessel (110 mt) to stay under the MRA for skates.

Although the above examples provide a simplified view of how MRAs are calculated instantaneously and how discarding may occur at the beginning of a fishing trip, the same logic can be applied to all C/Ps, motherships, and CVs. However, it is unclear at this time how much discarding could be avoided under this approach and whether significantly more discarding would occur at the end of the fishing trip as vessels attempt to stay under the MRA before offloading. In addition, there may be a time when a vessel unexpectedly comes to port and offloads before the vessel was able to harvest enough basis species to ensure they are not over an MRA, putting them in violation.

4.2 IR/IU

In addition to the MRA regulations, all vessels must also comply with improved retention/improved utilization (IR/IU) regulations. It is somewhat unclear if MRA or IR/IU regulation takes precedence. If MRA regulations were changed to define a trip as offload to offload for C/Ps and motherships, additional clarity in the IR/IU regulations may be necessary.

If a fishing trip for C/Ps and motherships was redefined as offload to offload, without additional regulatory changes, a vessel would be restricted to the lowest MRA for the duration of the fishing trip when the vessel has fished in an area closed to directed fishing. Under the current MRA regulations a new fishing trip is automatically triggered when a vessel enters an area with a different directed fishing prohibition. As a result, it is possible to restrict the vessel to the lowest MRA for the duration of the fishing trip because once the vessel moves out of that area a new fishing trip begins. If a fishing trip was defined from offload to offload without further regulatory changes, then the lowest MRA would apply if the vessel moved to an area with a different directed fishing prohibition from the time they left the dock until they offloaded the product onboard. This may cause confusion about how IR/IU regulations interact with MRA regulations.

IR/IU species for C/Ps and motherships include Pacific cod, pollock, shallow-water flatfish species complex in the GOA, and for non-AFA C/Ps (Amendment 80 C/Ps) using trawl gear in the BSAI, all species listed in Table 2a to 50 CFR part 679 (See Section 5.2.6 for more information regarding this Amendment 80 IR/IU regulation). C/Ps and motherships must retain a primary product for all IR/IU

species brought onboard the vessel if it is open to directed fishing, up to the MRA amount of the IR/IU species if directed fishing is closed, and must discard all of the IR/IU species if it is in prohibited status. If C/Ps and motherships are restricted to the lowest MRA amount based on fishing location for the duration of a trip, then it is unclear which regulations would take precedence, MRA or IR/IU.

For example, a C/P may harvest fish in an area open to directed fishing for Pacific cod, which would require 100 percent retention of all Pacific cod under the IR/IU regulations. The next day the C/P may move to an area where Pacific cod is closed to directed fishing. Under the IR/IU regulations the vessel must now keep up to the MRA. Under current regulation once a vessel harvests groundfish in an area closed to directed fishing, that vessel is restricted to that MRA level for the duration of the fishing trip. If a fishing trip is defined as offload to offload, then it is unclear if the MRA regulations or IR/IU regulations would take precedence. If the MRA regulations take precedence then the vessel would be restricted to only keeping Pacific cod up to the MRA for the duration of the fishing trip, even if the vessel moved into an area open to directed fishing. However, if the IR/IU regulations take precedence then the vessel would be required to keep all Pacific cod in areas where Pacific cod was open to directed fishing. If the MRA regulations take precedence, then it would likely increase regulatory discards.

As discussed in Section 3.1, NMFS and OLE currently direct CVs to give precedence to the MRA regulations over IR/IU. A reasonable interpretation of the current regulations is that once a vessel fishes in an area closed to directed fishing, under the MRA regulations, directed fishing of that species is now closed in all areas to that vessel. As a result, under the IR/IU regulations, the vessel would discard anything over the MRA amount because directed fishing is now closed to that vessel. This same interpretation would likely apply to C/Ps and motherships should fishing trips be defined from offload to offload unless further regulatory changes are made. Clarification may be needed as to which set of regulations take precedence if the regulation restricting vessels to the lowest MRA amount for the duration of the fishing trip is not changed when a fishing trip is defined as offload to offload.

4.3 Enforcing Areas Closed to Directed Fishing

OLE has expressed concerns in their ability to enforce targeting of a species in an SSL protection area to that species for directed fishing when MRAs are calculated from offload to offload (currently includes BSAI pollock and BS Atka mackerel). Under the current offload calculation method, targeted harvest of species closed to directed fishing would be measured against the total basis species harvested between offloads instead of within the closed waters; an issue now experienced in pollock closure areas throughout the Aleutian Islands. For non-AFA vessels, BSAI pollock and BS Atka mackerel MRAs are calculated offload to offload. MRAs for C/Ps fishing under a rockfish CQ permit are calculated at the end of each weekly reporting period. Although a fishing trip is not defined as offload to offload for these species, the regulations do stipulate that the MRAs are not instantaneous and the calculation is done upon offloading. Often vessels will top-off on certain high value species to harvest as close as possible to the MRA. Topping-off is a term used to describe when a vessel will target a species not open to directed fishing, but remain under the overall MRA. In cases where the MRAs are calculated from offload to offload, a C/P or CV delivering to a mothership could enter an area closed to directed fishing for a species, target that species, and still be under the MRA for that species at the time of the offload.

For example, in the AI, there are many Steller sea lion protection areas closed to directed fishing for pollock, Atka mackerel, and Pacific cod (Tables 4, 5, and 6 to part 679). These areas include haulouts and foraging areas. Directed fishing is defined as any fishing activity that results in the retention of an amount of a species or species group over the MRA. As a result, currently a C/P or CV delivering to a mothership could enter a closed haulout or foraging area, top-off on pollock, and not be in violation of the directed fishing prohibition for pollock in the area because the C/P or mothership is below the overall MRA for pollock when the vessel offloads. To limit targeting of a species inside a closed area under the current MRA regulations, an instantaneous calculation would be required with a fishing trip trigger when a vessel enters or leaves a closed area where a different directed fishing prohibition applies.

Offload MRA calculations have been proven to not prevent topping off behavior inside spatial closures, and because the directed fishing prohibition has not been violated, there is no enforcement action. This enables the targeting of BSAI pollock and BS Atka mackerel, two Steller sea lion forage species, in waters closed to these species surrounding Steller sea lion haulouts and rookery sites, including areas throughout the AI and in several critical areas of the BS such as the BS pollock restriction area (§ 679.22(a)(7)(ii)). Currently for all other species, a fishing trip is triggered for C/Ps and motherships when the C/P or CV delivering to a mothership enters or exits an area where a different directed fishing prohibition applies, including Steller sea lion protection areas. If MRAs for these species were also calculated offload to offload, or trip triggers surrounding protection areas were eliminated, it would increase the ability to top off on those species inside protection areas.

It should also be noted that the Council took action on a regulatory package in December 2006 to change the trip trigger to offload to offload for non-AFA C/Ps for some additional species (74 FR 7209, February 13, 2009). These species included yellowfin sole, rock sole, flathead sole, "other flatfish," arrowtooth flounder, Pacific cod, and Atka mackerel in BSAI and Pacific ocean perch in the AI. At that time, the Council expressed concern over the ability to prevent the targeting of Pacific cod and Atka mackerel harvest inside Steller sea lion closure areas. The Council recommended that the trip trigger be offload to offload and not instantaneous when a vessel was not in a Steller sea lion closure area. However, if a vessel was within a Steller sea lion area it was recommended that the MRA remain instantaneous and trigger a new fishing trip. A proposed rule was issued, but NMFS eventually withdrew the proposed rule (74 FR 65503, December 10, 2009) after receiving public comment stating that creating a new trip trigger when fishing inside a Steller sea lion closure area would likely not reduce discards and would be costly to participants.

Although it is true that under an offload to offload calculation a vessel is able to target more of a species inside the protection area through topping off behavior, instantaneous MRA calculations also do not completely prevent the targeting of fish inside a closed area. If the Council's purpose and intent of prohibiting directed fishing of certain species inside those areas is to control the total amount of harvest taken in those areas for Steller sea lion concerns and spread that catch out over time, then the current tools of directed fishing prohibition and use of MRAs are somewhat inadequate. These tools are ineffective in preventing topping off behavior (and therefore targeting) of these species inside the protection areas, even with instantaneous MRAs. Instantaneous MRA are hard for vessels to calculate and provide significant complexity and compliance risks whether intentional or not. Analysts and OLE noted that alternative methods for controlling catch of a species in these protection areas, such as harvest limits, closing the areas to all fishing, using target to define directed fishing instead of the MRA calculation, or not allowing targeted hauls inside the areas at any time, for example, could take the place of using MRAs to try and control the total amount of harvest taken from inside these areas.

CVs delivering shoreside are already subject to an offload to offload trip trigger. For a CV, an offload is defined as the transfer of all fish or fish product from the vessel. However, the MRA for a CV during a fishing trip in areas closed to directed fishing is the lowest MRA which is applicable in any area and at any time for the duration of the fishing trip. It is currently not practicable for OLE to enforce these instantaneous MRAs on CVs without at-sea patrols, observers, or EM onboard. Should instantaneous MRAs no longer be required on CVs, it would greatly reduce OLE's ability to enforce protection areas. In cases where the MRAs are calculated from offload to offload, without an instantaneous MRA, a CV could enter an area closed to directed fishing for a species, target that species, and still be under the MRA for that species at the time of the offload. However, this activity is currently difficult to enforce with instantaneous MRAs. OLE noted that removing instantaneous MRAs on CVs because of this enforcement difficulty, particularly if the Council decides on utilizing an alternative harvest prevention method instead (e.g. using target to define directed fishing; area gear closures, or area-specific TACs) could more effectively accomplish intended management goals.

4.4 Annual or Seasonal MRA Calculation

Expanding the MRA calculation period from offload-to-offload to an annual or seasonal framework for C/Ps targeting pollock could significantly improve retention and utilization while simplifying compliance. The current offload-to-offload method has been effective in reducing regulatory discards by allowing vessels to manage incidental catch across an entire trip. However, pollock remains the largest source of discards in the BSAI by volume, and operators often discard catch due to short-term fluctuations in catch composition, bycatch avoidance measures, and concerns about exceeding the MRA. While the existing system provides some flexibility, C/Ps still encounter regulatory constraints that limit their ability to retain incidental catch effectively. Broadening the MRA timeframe would extend these advantages further, allowing vessels to balance retention over a longer period while maintaining compliance with conservation objectives.

An annual or seasonal MRA calculation could also address inconsistencies between MRA and Improved Retention/Improved Utilization (IR/IU) requirements, which currently create a regulatory paradox requiring both retention and discards of the same species. The Amendment 80 fleet, which frequently encounters high pollock bycatch, must balance these conflicting rules while attempting to maximize retention. Aligning MRA calculations with a longer accounting period would reduce complexity, improve retention, and ease compliance burdens by consolidating enforcement efforts over time rather than on a per-trip basis. Additionally, this approach would support the objectives outlined in Alternative 5, which aims to address situations where things outside the vessel control provide a violation of the MRA limits.

If the Council were to consider this option, limiting it initially to the Amendment 80 sector for pollock could serve as a test case for potential application to other species. Given that pollock MRAs are already managed on an offload basis, expanding the timeframe could enhance retention without fundamentally altering existing management structures. Further analysis would be needed to assess potential impacts on vessel behavior, including safeguards to prevent increased harvest beyond intended limits or shifts in spatial distribution of catch. Implementing an annual or seasonal MRA for Amendment 80 sector pollock would provide greater flexibility while ensuring that valuable incidental pollock catch is utilized rather than discarded due to regulatory constraints tied to short-term fluctuations.

5 Expected Effects of Alternatives

This section presents a discussion of the economic, management, and enforcement effects that might be expected to occur as a result of modifying the MRA regulations. Alternative 1 is the no action alternative and would leave in place the existing regulations. The action alternatives would revise MRA regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) application of MRAs. These proposed changes would not change the original intent of MRAs and would not increase MRA percentages or change how MRAs assist in limiting harvest of a groundfish species within its annual total allowable catch. Specifically, Alternative 2 addresses NMFS recommendations to include changes to the definition of a fishing trip, calculations for MRAs, and application of MRAs. In addition, the alternative also includes several specific NMFS recommended modifications in the MRA regulations to improve clarity and efficiency in fishery operations. To address industry identified complexities when applying MRAs for vessels that are participating in more than one management area, Alternatives 3 would modify fishing trip definitions (triggers) and Alternative 4 would change MRAs calculation period to apply from offload to offload rather than applying throughout the duration of the fishing trip. Alternative 5 would add exemptions from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip prematurely. Finally, Alternatives 2, 3, 4, and 5 are not mutually exclusive, meaning the Council can recommend one or all of the alternatives.

Assessing the effects of these alternatives and options involves some degree of speculation. In general, the effects arise from the actions of individual participants in the fisheries, under the incentives created by different alternatives and options. Predicting these individual actions and their effects is constrained by incomplete information concerning the fisheries, including the absences of complete economic information and well-tested models of behavior under different institutional structures. In addition, exogenous factors, such as stock fluctuations, changes in market dynamics, and macro conditions in the global economy, will influence the response of the participants under each of the alternatives and options.

An estimate of the value of groundfish fisheries in the BSAI or GOA under Alternative 1 (specifically an estimate of producer and consumer surplus), is not available for any of the BSAI or GOA groundfish sectors. The primary reason for this is the lack of routine data collection on prices and quantities of industry inputs for these fisheries. Also missing are: (1) standardized records of prices and quantities of products; (2) costs of operations, or (3) models relating costs to effort and output, and (4) models describing demand functions for these groundfish products that can be related to fishing and processing inputs and decisions.

Even if some of these data and models existed for the groundfish sectors, it is unlikely that these tools would be sufficient to stratify the effects of many existing regulations in 50 CFR 679. For that reason, it is not possible to relate existing regulations on MRAs to changes in the value of groundfish resources and status quo fishing privileges for the different groundfish sectors.

5.1 Alternative 1, No Action

Under the No Action alternative, all regulations related to MRA would remain unchanged. Federal regulations at 50 CFR 679.20(e) establish MRAs as a percent of a basis species in Table 10 to part 679 for the Gulf of Alaska (GOA), Table 11 for the Bering Sea/Aleutian Islands (BSAI), and Table 30 for the Central GOA Rockfish Program (see Appendix 2 for a copy of these tables). The percentage of a species closed to directed fishing that is retained in relation to a basis species must not be exceeded. In most cases, any additional catch amount must be discarded at sea.

Additionally, under Alternative 1, the Alternative 2 MRA regulation adjustments to improve clarity and reflect current practices to help avoid confusion on MRA calculations will remain unchanged. NMFS identified three sections of the MRA regulations needing adjustments: (1) definition of a fishing trip

(§679.2 Fishing trip), (2) calculations for MRAs (§ 679.20(e)(2)), and (3) applications of MRAs (§ 679.20(e)(3)). Specifically, under Alternative 1 relative to Alternative 2, Options 1 through 7: (1) the definition of a fishing trip would remain unchanged thereby continuing to leave it unclear that motherships are responsible for the overall MRA of any CV delivering unsorted codends; (2) MRA regulations would remain unchanged leaving unclear how MRAs are calculated by fishery management program due to different fishing prohibitions in place for each fishery management program; (3) MRA regulations would remain unchanged with regards to referencing the correct citations for AFA vessels and AFA replacement vessels; (4) MRA regulations would remain unchanged that would have clarified that when CDQ uses an AFA vessel to harvest Amendment 80 species, that MRA calculations for BSAI pollock and BS Atka mackerel are at the time of offload and leave unclear the regulations that would have identified the basis species used for CDQ; (5) MRA regulations would be unchanged with regards to clarifying that MRAs take precedence over IR/IU regulations when vessels fish in areas with different fishing prohibitions; (6) IR/IU regulations for A80 vessels would be unchanged that would have reflected past Council actions; and (7) the definition of directed fishing at 50 CFR 679.2 would be unchanged for vessels participating in the pelagic trawl EM program such that vessels deploying pelagic trawl gear are directed fishing for pollock if the amount of pollock is 50 percent or greater of total catch.

Also under Alternative 1, changes to the number of fishing trip triggers that end a fishing trip for C/Ps and motherships as proposed in Alternative 3 would remain unchanged. There are currently five fishing trip triggers: (1) when all fish or fish product is offloaded, (2) if the vessels changes authorized gear type, (3) the effective date of a different fishing prohibition in the area that vessel is fishing, (4) when a vessel enters or leaves an area with a different fishing prohibition, and (5) the end of a weekly reporting period. Under Alternative 1, the effective date of different fishing prohibitions trigger, when a vessel enters or leaves an area with a different prohibition trigger, and the end of a weekly reported period trigger will remain in the regulations. In leaving these three trip triggers, the MRA calculations for multiple trips in each management program is complicated and results in a higher amount of discards of incidentally caught fish. The current week-ending trip trigger regulation was put in place to ensure a maximum seven-day trip length cap. Under current regulations, the average trip length for C/Ps between 2020 and 2024 was 4.2 days.

Alternative 1 would also leave in place the existing accounting period for most MRAs which applies at any time during a fishing trip as defined in regulation at § 679.2 Fishing trip. This MRA accounting period is known as “instantaneous,” because the MRA may not be exceeded at any point in time during the fishing trip. The MRA is calculated as a percentage of retained amount of species closed to directed fishing, relative to the retained amount onboard of basis species or species groups open for directed fishing. Tables 10 and 11 in CFR 679 lists MRAs as retainable percentages for BSAI and GOA groundfish species. For most BSAI and GOA groundfish species the percentages listed in Table 10 and Table 11 are used to calculate the allowable amount of a species to retain “instantaneously” (i.e., at any time during a fishing trip). Amounts that are caught in excess of the MRA percentage must be immediately discarded.

Under existing regulations, there are a few exceptions that require calculations of the MRA at the time of offload or at the end of a weekly reporting period and these exceptions would remain under status quo. The first exception allows the MRA for all vessels not listed in subpart F of this section (i.e., non-AFA trawl vessels), for pollock harvested in the BSAI (§ 679.20(e)(3)(iii)) and Atka mackerel in the BS (§ 679.20(e)(3)(v)) to be calculated at the end of each offload and are based on the basis species harvested since the previous offload. In addition, MRAs for C/Ps fishing under a rockfish cooperative fishing quota permit in the Central GOA are calculated at the end of each weekly reporting period (§ 679.20(e)(3)(iv)) and are based on the basis species harvested since the previous reporting period.

If a species were closed to directed fishing, maintaining the existing instantaneous MRA management period would require vessels to discard any incidental catch over the MRA, including valuable incidental catch at that moment in time. This is especially true during the early portion of a trip when a vessel does

not have sufficient basis species to retain the incidental caught species up to the MRA. Once the vessel has sufficient basis species to meet the instantaneous MRA calculation period, then the vessel operator can retain incidentally caught groundfish species up to the MRA for that species. For valuable incidental caught species, regulatory discards due to insufficient basis species under an instantaneous MRA calculation period result in lost revenue for the vessel. Instantaneous MRA calculation also results in higher mortality of incidental catch species due to regulatory discards for species that are likely caught early in the trip when insufficient basis species are present on the vessel but are later caught and retained when sufficient basis species are present.

Finally Alternative 1 would not change the MRA regulations to allow for exemptions in cases of medical emergencies, mechanical emergencies, or poor weather conditions. There have been instances where a vessel has come to port due to unforeseen circumstances such as an onboard medical emergency or mechanical issue. Because the vessel had to end their fishing trip earlier than expected, the vessel may end up over the MRA for one or more species if they have not accumulated enough basis species. Current regulation states that MRAs apply at any time and to all areas for the duration of the fishing trip, with the exception of BSAI pollock and BS Atka Mackerel for non-AFA vessels. If a vessel is over the MRA at the end of a fishing trip it is a violation, even if the vessel had to come to port due to a medical emergency, mechanical issue, or poor weather conditions. Under this alternative, provisions in regulations specifically addressing a vessel coming to port due to a medical emergency, mechanical issues, or poor weather conditions will not be addressed and therefore a vessel operator would still be responsible to ensure they are not over an MRA, whether the calculation period is "instantaneously" throughout the fishing trip or offload to offload.

5.2 Alternative 2 – Revise MRA Regulations

Under Alternative 2 are several NMFS proposed options that would modify MRA regulations. These modifications would revise MRA regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) application of MRAs. Below is a description of Alternative 2 options and their expected effects. Additionally, Alternative 2 expected effects section includes an additional option from the June 11, 2024 Council motion that would revise the definition of directed fishing for vessels participating in the pelagic trawl EM program. This has been included as Option 7 due to the similarity of the option with the purpose and need of this action (see Section 2.2.1 for further information).

5.2.1 Option 1 – Modify the definition of a fishing trip to make it clear that motherships are responsible for the overall MRA of any CV delivering unsorted codends

Although a mothership is listed under the definition of a fishing trip as a vessel that is engaged in a fishing trip, it is currently unclear in regulation what this means since a mothership is not actively harvesting groundfish. Instead, a mothership usually relies on receiving unsorted codends from CVs. Unsorted codends do not allow a catcher vessels to sort catch to remain under the MRA. Currently the regulations imply that a fishing trip trigger is met when the C/P or mothership enters or leaves an area with different directed fishing prohibitions, or if the C/P or mothership changes gear. However, if the mothership is not harvesting groundfish, then these triggers applying to mothership activity are not practical. In practice, motherships are basing the fishing trips they are tracking for MRAs on the delivering CV activities. For example, if a CV enters or leaves an area where a different directed fishing prohibition applies, then that activity will trigger the mothership to start a new fishing trip. Likewise, if the mothership is receiving catch from CVs using different authorized trawl gear (e.g., pelagic trawl (PTR) and non-pelagic trawl (NPT)), each gear type will trigger the mothership to create a new trip. Under the proposed action, the definition of a fishing trip would be clarified by adding language that states these triggers are met when a CV delivering unsorted codends and delivering to a mothership enters or leaves areas with a different directed fishing prohibition, or when a CV is using different authorized trawl gear. In addition, the

definition of a CV fishing trip would be modified to exclude CVs delivering unsorted codends since harvest from those vessels is being accounted for on the mothership.

It should be noted that, while most mothership activity involves taking unsorted codends, a mothership may receive catch from vessels using gear other than trawl gear. Unsorted codends are passed to the mothership and then sorted. The CV does not have an opportunity to sort the catch to ensure they are within MRAs, therefore it is the mothership's responsibility to ensure compliance with the MRA regulations. However, CVs using other gear types do not pass unsorted catch to motherships. For example, if a CV is fishing with pot gear, the CV brings the pot onboard and then sorts and discards the catch before the catch is transferred to the mothership for processing. Under these circumstances, the CV would be responsible for MRA compliance and not the mothership. Catch from these CVs would not be incorporated into the overall mothership MRA calculation.

5.2.2 Option 2 – Clarify that MRAs are calculated by fishery management program due to different fishing prohibitions in place for each fishery management program

Vessels are often engaged in fishing for multiple management programs during a fishing trip. For example, a CV may be participating in both IFQ and an open access (OA) fishery, a C/P may be participating in both Amendment 80 and a CDQ fishery, and a mothership may be taking deliveries from vessels engaged in both CDQ and OA. With the exception of the Rockfish Program (Table 30 to part 679), the MRA amounts in the GOA (Table 10 to part 679) and BSAI (Table 11 to part 679) remain the same regardless of which management program a vessel is fishing. However, the applicable MRA basis species may change depending on the management program. For example, Pacific cod may be closed to directed fishing in the OA fisheries but open for CDQ. In this case, while the vessel is fishing in the OA management program Pacific cod may only be retained up to the MRA amount, but when the vessel is fishing under the CDQ Program all Pacific cod should be retained. Changing management programs is not currently specifically listed as a criteria that would end a fishing trip nor is it currently mentioned in the application regulations for MRAs. However, in practice, vessels are calculating MRAs by management program based on the different applicable basis species. This would be made clear in the regulations by adding regulatory language specifically stating that MRAs are calculated by management program and listing those management programs. Management programs used to calculate different MRAs would include Amendment 80, Pacific Cod Trawl Cooperative (PCTC), CDQ, IFQ, AFA, Aleutian Islands Pollock (AIP), Rockfish Program, and OA.

There are currently regulations (§ 679.5(a)(1)(iii)) outlining some, but not all, of the management programs which require separate reporting in logbooks, forms, and eLandings (i.e., CDQ, Exempted Fishery, Research Fishery, AIP, OA, Rockfish Program, and PCTC). Generally speaking, vessels are reporting an entire haul to one management program, even if it is not a management program in the referenced regulation listed above (i.e., for example Amendment 80 is not listed at § 679.5(a)(1)(iii)). This practice makes it easier for vessels to track the different MRA calculations required for each management program. However, this is an issue for IFQ. If a fixed gear C/P or CV has a sablefish or a halibut IFQ holder onboard with available IFQ and the C/P or CV catches a sablefish or a halibut, then the catch is required to be retained and be deducted from the IFQ account. For example, if the vessel is participating in an OA Pacific cod fishery, has a sablefish IFQ holder onboard with available IFQ, and catches one sablefish, that sablefish should be retained and deducted from the IFQ account. This would result in two eLandings reports (one for OA and one for IFQ), but it would be difficult for the vessel to split out the haul in the logbook between OA and IFQ in this situation. Although this may cause some confusion when calculating MRAs by management program, it is still possible to calculate separate MRAs for each management program based on the eLandings data.

Catcher/processors also acting as Motherships

Many C/Ps also act as motherships at the same time. C/Ps actively harvest and process their own catch, while concurrently operating as a mothership and taking unsorted codends from trawl CVs. These CVs are unable to sort their own codends to ensure they are within MRAs because the catch is never brought onboard the vessel. Instead the catch is sorted on the mothership. In practice, the MRA is calculated based on total catch onboard the mothership for the mothership's fishing trip, not each individual CVs fishing trip. The definition of a fishing trip is the same for both C/Ps and motherships. Because the definition is the same, in cases where a C/P is also acting as a mothership, one fishing trip can include both activities at the same time. As a result, C/Ps also acting as a mothership are calculating MRAs based on total catch from both their C/P activity and mothership activity combined as long as the combined activity is for the same management program and fishing trip. To assist in clarifying MRA calculations, Option 2 would also include language stating the MRA calculation is combined for both C/P and mothership activity by management program.

Community Development Quota

Directed fishing calculations and determinations need to be updated for Community Development Quota (CDQ). Current regulation states that any groundfish species that is closed to directed fishing may not be used to calculate retainable amounts of other groundfish species. In addition, only fish harvested under the CDQ Program may be used to calculate retainable amounts of other CDQ species (§ 679.20(f)(2)). Under the CDQ Program, some species are specifically allocated to the CDQ groups by regulation. However, regulation further stipulates that other groundfish species not listed specifically in regulation (e.g., Kamchatka flounder, Alaska plaice) can be allocated to the CDQ Program after consultation with the Council and a determination if sufficient TAC exists to open a directed fishery and if it is economically viable for CDQ groups to target that species (§ 679.20(b)(1)(ii)(D)(2)). NMFS would likely recommend that the CDQ Program be allocated a non-listed groundfish species if CDQ groups were exceeding the MRA for that non-listed species. In 2006, changes regarding the CDQ Program were made to the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act)[15], and were implemented through NMFS rulemaking (77 FR 6492, March 9, 2012). These revisions stated that vessels participating in CDQ fisheries could not have more restrictions than vessels participating in non-CDQ fisheries. Other sectors are able to use any species open to directed fishing as a basis species for calculating MRAs. Since CDQ cannot be treated more restrictively than other sectors, and because any species could be allocated to the CDQ Program, the MRAs for CDQ groups are being calculated based on any species open to directed fishing and not only CDQ allocated species. Although this is the current practice, the regulations have not been updated to reflect changes in the Magnuson-Stevens Act. These regulations under Option 2 would be updated to clarify how CDQ groups are currently calculating MRAs.

5.2.3 Option 3 - Correct regulation citations for AFA vessels and AFA replacement vessels

The MRAs for BSAI pollock and BS Atka mackerel are calculated at the end of each offload for all non-AFA vessels instead of at the end of each fishing trip. These offload regulations do not apply to vessels with an AFA permit or their replacement vessels. AFA vessels are required to calculate MRAs for BSAI pollock and BS Atka mackerel at any time during a fishing trip unless the vessel with an AFA permit is participating in CDQ and retaining Amendment 80 allocated species. Although these offload MRA regulations already exist, several aspects of these regulations need clarification.

[15] Section 305(i)(1)(B)(iv) of the Magnuson-Stevens Act (MSA) states, "The harvest of allocations under the program for fisheries with individual quotas or fishing cooperatives shall be regulated by the Secretary in a manner no more restrictive than for other participants in the applicable sector, including with respect to the harvest of non-target species."

The current MRA regulations do not reference the correct CFR citation for describing AFA permitted vessels for which the regulations do not apply. There are regulations at § 679.4(l) which specifically list out how and to whom AFA permits are issued. However, instead of citing these regulations, it currently cites Subpart F, which generally describes the AFA program and does not specifically cite the permits. Under the proposed action, the correct reference for listed AFA vessels, § 679.4(l), will be added to the MRA regulations to ensure industry and the NOAA Office of Law Enforcement (OLE) can clearly identify vessels for which the regulations pertain.

Additionally, the MRA regulations also do not specifically include AFA replacement vessels. Specific vessel names are listed in § 679.4(l) as having AFA permits, but some of these vessels have been replaced since those regulations were implemented. Although this section of the regulations does discuss AFA replacement vessels, the revised MRA regulations under the proposed Option 3 would include a clause that states replacement AFA vessels are required to calculate MRAs for BSAI pollock and BS Atka mackerel at any time during a fishing trip.

5.2.4 Option 4 - Clarify that when CDQ uses an AFA vessel to harvest Amendment 80 species BSAI pollock and BS Atka mackerel MRAs are calculated at the time of the offload and clarify the species used as basis species for CDQ

Many AFA permitted vessels also participate in various CDQ fisheries. Some of this CDQ fishing is for the same species that are allocated to the Amendment 80 Program. In 2006, changes regarding the CDQ program were made to the Magnuson-Stevens Act and were implemented through NMFS rulemaking (77 FR 6492, February 8, 2012). These revisions stated that vessels participating in CDQ fisheries could not have more restrictions than vessels participating in non-CDQ fisheries. This means that if an Amendment 80 vessel is able to calculate MRAs for BSAI pollock and BS Atka mackerel from offload to offload, then a CDQ vessel (even if it is an AFA vessel) also fishing for Amendment 80 species should be able to do the same. Therefore, under Option 4, the regulations will be modified to clarify when a CDQ group uses an AFA vessel to harvest Amendment 80 species, the BSAI pollock and the BS Atka mackerel MRA will be calculated at the time of offload and the regulations will clarify the species used as basis species for CDQ.

5.2.5 Option 5 - Clarify that MRAs take precedence over improved retention/improved utilization (IR/IU) regulations when vessels fish in areas with different fishing prohibitions

There is a regulatory requirement to keep some species up to the MRA under the IR/IU program (§ 679.27). For CVs, this includes pollock, Pacific cod, and the shallow-water flatfish species complex in the GOA. Currently it is unclear whether MRA or IR/IU regulations take precedence regarding these species for CVs. Under the MRA regulations, it states that a CV who harvests fish from an area closed to directed fishing must apply the lowest MRA to all areas at all times for the duration of the fishing trip. However, the IR/IU regulations state that a CV has a minimum retention requirement for pollock, Pacific cod, and the shallow-water flatfish species complex in the GOA. If directed fishing is open for one of those species in an area a CV is active, then any of these species caught must be retained. If the species is closed for directed fishing, then a CV must retain the fish up to the MRA before any can be discarded. If the species is on prohibited for retention status, then the fish must be discarded. A fishing trip for a CV is currently defined from the time harvesting of groundfish begins until all fish or fish products have been offloaded. Furthermore, CVs are allowed by regulation to move between areas with different fishing prohibitions within the same fishing trip.

For example, a pot CV could begin a trip fishing for sablefish in the Bogoslof area where Pacific cod is closed to directed fishing. If Pacific cod is caught while harvesting sablefish, under the IR/IU regulations the CV is required to keep up to the MRA amount of Pacific cod (20%) before discarding. The CV may then move outside of Bogoslof to an area where both Pacific cod and sablefish are open to directed

fishing. Under the MRA regulations, CVs would be restricted to keeping only 20% of Pacific cod because they already fished in an area closed to directed fishing for Pacific cod during their fishing trip. However, by discarding Pacific cod over the 20 percent MRA, the CV is then in violation of the IR/IU regulations that state all Pacific cod must be retained in areas where it is open to directed fishing.

NMFS and OLE currently direct industry to give precedence to the MRA regulations over IR/IU. This promotes regulatory discard. In the example listed above, the CV would be required to discard any catch over the MRA amount, even when harvesting groundfish in an area open to Pacific cod directed fishing. A reasonable interpretation of the regulations is that once a CV fishes in an area closed to directed fishing, under the MRA regulations, directed fishing of that species is now closed in all areas to that CV. As a result, under the IR/IU regulations, the CV would discard any catch over the MRA amount because directed fishing is now closed to that vessel. To address this issue, Option 5 would clarify in regulations that the MRAs take precedence over IR/IU regulations when vessels fish in areas with different fishing prohibitions.

5.2.6 Option 6 - Update IR/IU regulations for Amendment 80 vessels to reflect past Council actions

IR/IU regulations are intricately connected to MRAs. As such, NMFS has identified additional IR/IU regulations that would be clarified under Option 6. Current regulations at § 679.27(b)(4), list all species in Table 2a[16] to part 679 (FMP groundfish) as IR/IU species for Amendment 80 C/Ps. Under this regulation, Amendment 80 C/Ps are required to retain all FMP groundfish species closed for directed fishing up to the MRA and make a percentage of it a primary product (§ 679.27(c)(2)). From 2008 to 2012, Amendment 80 vessels were subject to groundfish retention standards (GRS) which established regulatory minimum retention levels of groundfish. These regulations were removed temporarily by an emergency rule in 2011 and permanently by a final rule in 2013. With the removal of GRS, Amendment 80 cooperatives stated their intent to maintain groundfish retention rates similar to GRS and are required to submit an annual Amendment 80 cooperative report to NMFS which includes information on the percent of groundfish retained for each cooperative (§ 679.5(s)(6)). Amendment 80 cooperative reports, which include retention information, are also presented to the Council annually. The final rule removing GRS stated that it removed certain regulatory requirements that mandated minimum levels of groundfish retention (78 FR 12627, February 25, 2013). The rule also states that Amendment 80 participants are subject to a 15 percent utilization standard for all retained FMP groundfish species (§ 679.27(i)). However, current IR/IU regulation still requires full (100%) retention of all FMP groundfish by Amendment 80 C/Ps. To address this issue, the § 679.27(b)(4)[17] regulations would be updated under this option to make clear the intended utilization of 15 percent, and remove the full retention requirement of some FMP groundfish species for Amendment 80 C/Ps.

5.2.7 Option 7 - Revise the definition of directed fishing at 50 CFR 679.2 for vessels participating in the pelagic trawl EM program such that vessels deploying pelagic trawl gear are directed fishing for pollock if the amount of pollock is 80 percent or greater of total catch

Option 7 seeks to address a conflict between the regulatory definition of directed fishing and regulations implemented for the trawl electronic monitoring (EM) category (89 FR 60796, July 29, 2024). The trawl EM category was implemented in 2025 and is a voluntary program for catcher vessels targeting pollock using pelagic trawls in the Bering Sea and Gulf of Alaska (GOA). The trawl EM category requires vessel operators to retain all groundfish harvest, with allowances for discards under limited situations. For vessels participating in the directed pollock fishery (EM and non-EM vessels) Pacific Ocean Perch (POP)

[16] Available at https://www.ecfr.gov/current/title-50/part-679/appendix-Table%202a%20to%20Part%20679
[17] Available at https://www.ecfr.gov/current/title-50/part-679#p-679.27(b)(4)

are a common incidental catch species that are difficult to distinguish on sonar. POP incidental catch is common while directed fishing for pollock, particularly in the Central GOA. Since vessel operators cannot reliably differentiate between POP and pollock while fishing, vessels may encounter what is known as a "red bag" event, where POP catch is a significant portion of the haul. Typically trawl vessels do not exceed other species MRAs when directed for pollock

When pollock is the basis species for calculation, the MRA for aggregated rockfish species, which includes POP, is 5%. Under the regulatory definition of directed fishing, if a vessel retains more than the MRA amount of 5% of aggregated rockfish species while fishing for pollock, the vessel is considered to also be directed fishing for POP. For example if a vessel has 6% POP and 94% pollock, under the regulatory definitions, the vessel is directed fishing for both POP and pollock.

POP incidental catch is unpredictable, but does occur with some degree of regularity, as indicated by the data collected by vessels participating in the exempted fishing permit (EFP) for the trawl EM category. Between January 2021 and December 2024, a total of 1,556 trawl EM deliveries were landed in the Central GOA. Of those 1,556 deliveries, 54% had POP of any quantity in the harvest, and 9.8% of deliveries exceeded the aggregated rockfish MRA. Deliveries with more than 5% aggregated rockfish technically resulted in regulatory violations of directed fishing for a closed species, despite the incidental nature of the catch. A close examination of these trawl EM trips revealed that the catch of POP by vessels in the trawl EM category is similar to the catch of POP by vessels that are not in trawl EM category. The only difference is the requirement to retain all catch that applies to vessels in the trawl EM category to facilitate catch accounting upon delivery.

Prior to the implementation of the trawl EM category, vessels directed fishing for pollock could discard POP, ensuring that aggregated rockfish species accounted for no more than the 5% of their retained catch, thereby complying with the regulatory definition of directed fishing. This scenario still applies to catcher vessels harvesting pollock that are not in the trawl EM category, who are still required and allowed to discard. The trawl EM category implemented a prohibition on discards, except in extremely limited circumstances. This inadvertently created a conflict for EM vessels when they encountered POP incidental catch that exceeded 5% of their catch because of the conflict with MRA regulations which are intended to limit retention of incidental catch species. Such overages (e,g, more than 5% aggregated rockfish) would normally be discarded if they were not in the trawl EM category. Consequently, in the event of a high incidental catch haul, or “red bag”, it may not be possible for a vessel to comply with the trawl EM category full retention requirement without violating the prohibition on directed fishing for POP by exceeding the MRA.

To address these conflicting requirements for trawl EM category vessels, the approach recommended by the Council in the June 2024 motion, as discussed in Section 2.2.1, would be to modify the regulatory definition of “directed fishing” to state that a vessel participating in trawl EM category is directed fishing for pollock (and no other species) when 80% of delivered harvest is pollock. This approach would remove this conflict in regulation and ensure compliance with full retention implemented for vessels participating in the trawl EM category. The rationale of proposing 80% as the directed fishing threshold is to provide a cap to prevent changes in vessel behavior, which is consistent with the goal of the trawl EM category, while also remaining consistent with the intent of the original MRA regulations. Another important point to note is that trawl EM category vessels in the GOA are subject to an incentive plan agreement. These incentive plans are a tool implemented under the trawl EM program that seeks to prevent changes in vessel behavior when the MRA regulations and pollock trip limits were relaxed in order to ensure full retention. These incentive plans have measures that remove financial incentives for catch in excess of the MRA and prevent vessels from fishing in areas that are closed to directed fishing.

Defining directed fishing for pollock (and no other species) when 80% of delivered harvest is pollock limits changes to fishing behavior and makes impacts to the management of POP and other species unlikely. Instead, this approach provides clarity for vessels in the trawl EM category by eliminating

unintended compliance issues stemming from the aforementioned regulatory bind. POP is managed as both a directed fishery and as incidental catch in other fisheries. The reality is that, in most cases, POP incidental catch remains below the 5% threshold. However, the POP biomass has increased in recent years, which has resulted in a higher rate of MRA overages.

Fishermen typically try to avoid harvesting POP while directed fishing for pollock because it has limited market value. Shoreside processors receiving these deliveries change their setup to align with seasonal fisheries, and are not prepared to receive rockfish deliveries during this time of the year. Due to the seasonal changes to the processor, most POP harvest is landed as low-value fish meal. Many of the vessels that target pollock in the GOA also participate in the directed POP fishery under the Rockfish Program. For these reasons, it is reasonable to conclude that there is little to no financial incentive for vessels to intentionally target POP outside of the Rockfish Program when POP is low value (i.e., POP is sold as low value-fish meal when caught out of season). Vessels would most likely work to keep as much of their POP quota available for harvest when the shoreside processor is willing to pay a higher price. Therefore, this proposed regulatory change would not create a new directed fishery, nor would it drive additional harvest of POP by vessels that are targeting pollock.

Redefining "directed fishing" for pollock as "80% or more of the total catch for vessels participating in the trawl EM category" would likely resolve compliance issues, ensuring vessels are able to meet EM requirements while remaining in compliance with directed fishing regulations. Further, this change could provide additional benefits to the broader trawl EM category by modernizing fisheries management through offering greater flexibility in defining pollock fishing activities, reducing regulatory complexity, and improving alignment between monitoring needs and practical fishing operations.

5.3 Alternative 3 – Revise Fishing Trip Definitions

This alternative would revise the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships (not including current offload-to-offload species - BSAI pollock, Bering Sea (BS) Atka mackerel, and weekly reporting period species in the Central GOA Rockfish Program). By regulatory definition at 50 CFR 679.2, five conditions end a trip for catcher processors and motherships, based on whichever condition occurs first:

A. The effective date of a notification prohibiting directed fishing in the same area under § 679.20 or § 679.21;
B. The offload or transfer of all fish or fish product from that vessel;
C. The vessel enters or leaves an area where a different directed fishing prohibition applies;
D. The vessel begins fishing with a different type of authorized fishing gear; or
E. The end of a weekly reporting period, whichever comes first.

Under Alternative 3, three triggers would be removed: (A) the effective date of a different fishing prohibition in the area the vessel is fishing, (C) when a vessel enters or leaves an area with a different fishing prohibition, and (E) the end of a weekly reporting period. Two triggers would remain: (B) when all fish or fish product is offloaded and (D) if the vessel changes authorized gear type. Though the use of more than one gear type by C/Ps and motherships is not common, keeping separate fishing trips by gear type is necessary because there are often different fishing prohibitions for each gear type. Because the practice of using multiple gear types on a vessel is not common, Alternative 3 would primarily lead to offload-to-offload fishing trips, similar to those in the regulatory definition of fishing trip for CVs.

Under Alternative 3, MRAs would still be calculated by management program and MRAs for most species would still be instantaneous. The vessel would still need to keep track of MRAs for each management program by haul to ensure there is not an MRA overage at any point in time during the fishing trip. A C/P or mothership who stays on the fishing grounds for three weeks and participates in three management programs each week would reduce their MRA calculations from nine in the status quo

(one for each management program and each week) to three (one for each management program from offload to offload). The vessel would calculate the MRA by summing all the retained species that are open to directed fishing as the basis species from the time it began operating until the vessel offloaded. If, during the trip, the vessel participates in an area that is closed to directed fishing for a species, then that species would no longer be considered a basis species for that portion of the trip. This is consistent with OLE's current industry directives for CVs, outlined in more detail in Section 5.2.5.

Below is a description of Alternative 3 and the expected effects. Due to the lack of data indicating the volume of discards that occurred due to MRA regulatory constraints, analysts have qualitatively described the ways in which vessel behavior or economic impacts would change under Alternative 3.

Primary Effects

This alternative could provide a strong economic incentive to harvest high valued species up to their MRA amounts by providing greater operational flexibility during a fishing trip. Reducing the number of trip triggers would reduce the number of trips between offloads, and increase the length of each trip. As a simplified example, a 21-day voyage where a vessel stayed in the same area would only trigger 1 fishing trip under Alternative 3, instead of 3 fishing trips under Alternative 1. Dividing voyages up into fewer, longer fishing trips results in fewer "restarts" for MRA calculations, and allows greater operational flexibility for vessels. This would allow vessel operators to accumulate a greater number of basis species per trip, and to retain incidental catch species that would have otherwise been discarded under Alternative 1 due to insufficient volumes of basis species.

Industry has testified that tracking and calculating MRAs throughout a voyage can be complicated and confusing for vessels, due in part to the number of fishing trips that C/Ps and motherships trigger per voyage. The current MRA regulations appear to be most difficult for operators at the beginning of a fishing trip when vessels do not have significant amounts of the basis species on board to retain valuable incidentally caught species. Early in the trip, the MRA for a valuable incidental species may be set at a very low volume if the vessel has not yet had time to catch sufficient quantities of basis species during the fishing trip. If a vessel catches incidental catch species that exceeds the MRA for the basis species currently on board, the portion of the incidental catch species exceeding the MRA must be discarded, known as a regulatory discard. Many of these incidentally caught species are valuable, and would not otherwise be discarded if regulation did not mandate the discard. For valuable incidental catch species, the required discard over the MRA due to insufficient basis species early in the trip is an economic loss to the vessel. It also results in higher mortality of incidental catch species if these same species are caught later in the trip when sufficient basis species are available. Later in the trip, after sufficient amounts of the basis species have been caught, it is more likely that a vessel will have enough of the basis species on board to accommodate catch that includes incidental catch of an MRA species without being required to discard that incidental species.

Alternative 3 may also increase the ability for the vessel to top off on valuable incidental catch at the end of the trip, depending on their current ability to utilize the full MRA. If the volume of valuable incidental catch is under the MRA near the end of the fishing trip, a vessel may choose to "top off" (i.e., covertly target species "closed" to directed fishing) until they reach the MRA. The vessel will target these high-value MRA species before their fishing trip ends in order to harvest as close as possible to the MRA. Extending the length of a fishing trip would allow operators to use the entire volume of basis species caught during the voyage in their MRA calculations, and would provide additional time for operators to engage in targeted topping off efforts for high-value incidental catch species.

Overall, under Alternative 3 vessels would engage in longer fishing trips and encounter fewer trip restarts between offloads, which could reduce regulatory discards and may provide additional opportunities to top off on valuable incidental catch at the end of the trip. Therefore, the overall economic impact of reducing the number of trip triggers for C/Ps and motherships is expected to be positive. The magnitude of the

economic impact is dependent on the current utilization of MRAs, the difference between the current trip length and the offload-to-offload length (i.e. the amount of additional operational flexibility granted), and the strategic behavior of vessels.

If a vessel is currently able to harvest up to the MRA of valuable species for all fishing trips between offloads, then the fishing trip trigger reduction under Alternative 3 would have no economic impact. However, if the trip trigger length is constraining for vessels, and trips end before a vessel is able to harvest or accumulate their entire MRA allotment for valuable species, the additional flexibility granted in Alternative 3 may allow them to retain a higher volume of economically valuable incidental catch species then they otherwise would have under Alternative 1. Given that the proportions that constitute many MRAs were designed to reflect the upper end of expected incidental catch rates, vessels may both reduce discards and be able to increase harvest efforts for valuable incidental species under Alternative 3.

Impacts on Trip Lengths

Alternative 3 would increase trip lengths by reducing the number of trips triggered between offloads. Because current MRA regulations appear to lead to regulatory discards more often during the beginning of a fishing trip, Alternative 3 could reduce the volume of regulatory discards that would have otherwise occurred at the beginning of trips triggered while a C/P or mothership is at sea. It may also provide increased opportunities to indirectly target incidental species at the end of a trip. NMFS and the Council originally created the weekly reporting period trip trigger to deliberately reduce opportunities to covertly target species closed for directed fishing. Recordkeeping and reporting during this time period was at a weekly level. We did not have trip specific catch reporting periods. Extending MRA accounting beyond this seven-day maximum would increase the maximum accounting interval, which may dilute this traditional constraint to indirect targeting should other trip-ending criteria not be consistently triggered within a similar interval.

Data that indicates which trigger ended a fishing trip does not exist. However, it is possible to estimate which trips ended due to the week ending criteria by looking at the day that fishing trips ended. Absent the week ending criteria, it is reasonable to assume that trips would end with approximately equal proportions on each day of the week. The week ending criteria will trigger a new trip in cases where other conditions are not met, creating a seven-day maximum MRA accounting interval in line with the first day of the weekly reporting period. This sets a standard maximum interval for vessels in the C/P and mothership sector, which can remain at sea for multiple weeks at a time. The week ending criteria ends any active fishing trips each Saturday night, and triggers a new trip each Sunday.

Data from CAS indicates that 52% of all C/P fishing trips ended on Saturday within the last three years. Though some trips ending on Saturday may have ended due to another trip trigger, the significant difference between the proportion of trips ending on Saturday versus trips ending on other days of the week (ranging from 6% ending on Sunday, to 11% ending on Friday) suggests that the week ending trigger may be a operational constraint.

The difference between current trip length averages, and current average days between offloads, can be used as a proxy to estimate the additional operational flexibility granted under Alternative 3.

The average length of a fishing trip for C/Ps varies by sector. Below is a table describing trip, deployment, and offload-to-offload lengths by sector, calculated as three-year averages. For all C/Ps, an average trip is 4 days, the average deployment (port to port) is 12 days, and the average time between offloads is 19 days. The time between offloads is greater than the average deployment length because vessels may go into port without offloading product. This may occur when a vessel is refueling, changing crew, or returning to port for a medical or weather emergency, for example. On average, 4.2 trips occur between each offload. Assuming that very few trips are triggered due to gear changes, and all other fleet

behavior remains constant, it can be estimated that Alternative 3 would increase the average trip length from 4 days to 19 days.

Table 5-1: Average Length, in Days, of Fishing Trips, Deployments, and Between Offloads, by C/P Sector. Three-Year Average

	A80	AFA	HAL C/Ps	Pot C/Ps	Total CPs
Fishing Trip	3	3	5	6	**4**
Port to Port	10	10	19	12	**12**
Offload to Offload	17	18	23	15	**19**

Source: AKFIN, and NPFMC staff calculations.

The following scenario has been highlighted as a simplified example of how Alternative 3 could have a positive economic impact for a vessel simply by increasing the length of the trip. In this scenario, the vessel catches two species: a basis species, and an incidental catch species that has a 30% MRA.

In this scenario, the vessel harvests 10mt of basis species, and no incidental species on day one of the voyage. Under the status quo, Trip A ends on this day, and the 3 mt MRA went unused. On the second day the vessel harvested 10 mt of basis species, and 6 mt of incidental catch species. Under the status quo, the vessel is only allowed to keep 3 mt of incidental catch, using only the basis species from Trip B in their MRA calculation. Under Alternative 3 the vessel would be able to keep all 6 mt of incidental catch species because they did not trigger a second trip, and are still fishing under Trip A. This allows the vessel to use the basis species catch from day one and day two in the MRA calculation. Therefore, the vessel is able to retain an additional 3 mt of incidental catch, and reduce their regulatory discards by 3 mt.

As shown in this scenario, this Alternative has a positive economic impact when a vessel has unused MRA at the end of a fishing trip under the status quo. However if the vessel is already utilizing their full MRA allotment, then this Alternative will have no economic impact on that vessel.

Table 5-2: Scenario 1: High incidental catch volumes in later part of voyage

		Basis Species Catch Volume	MRA	Incidental Catch Species Volume	Retained Incidental Catch	Discarded Incidental Catch
Status Quo: 2 trips	Trip A (Day 1)	10 mt	3 mt	0 mt	0 mt	0 mt
	Trip B (Day 2)	10 mt	3 mt	6 mt	3 mt	3 mt
	Voyage Total	**20 mt**	**6 mt**	**6 mt**	**3 mt**	**3 mt**
Alt. 3: 1 Trip	Trip A (Day 1)	10 mt	3 mt	0 mt	0 mt	0 mt
	Trip A (Day 2)	10 mt	3 mt + 3 mt	6 mt	6 mt	0 mt
	Voyage Total	**20 mt**	**6 mt**	**6 mt**	**6 mt**	**0 mt**
Impact of Alt. 3:			**-3 mt unused MRA**		**+3 mt retained**	**-3 mt discarded**

Impacts on Topping Off

The likelihood that topping off would increase under Alternative 3 is dependent on the value, distribution, and current MRA utilization of each species, by sector. Species that are most likely to be harvested at higher volumes under this alternative are high-value incidental species with low discard rates. Low discard rates may imply that the MRA for that species is not constraining under Alternative 1, and may not be fully utilized. These species are more likely to be increasingly targeted towards the end of a fishing trip, a behavior which could increase with the increased operational flexibility under Alternative 3. As described above, the magnitude to which this may occur is dependent on the current utilization of MRAs, and how constraining the current trip lengths and triggers are for vessels to harvest and retain the full MRA allotment under the time and area constraints that the trip triggers create. For valuable incidental species not consistently harvested up to the full MRA for each fishing trip in the current regulatory environment, Alternative 3 may provide an avenue for additional harvest, and additional targeted fishing efforts to occur in order to maximize the value of each voyage.

The following scenario has been highlighted as a simplified example of how Alternative 3 could have a positive economic impact for a vessel. By allowing additional flexibility in trip lengths, a vessel can accumulate a larger volume of basis species per trip, and therefore may be able to catch and retain additional incidental catch species under Alternative 3 if they are unable to use their full MRA allotment under Alternative 1. In this scenario, the vessel catches only two species: a basis species, and an incidental catch species with a 30% MRA.

In this scenario, the vessel is at sea for three days. The vessel encounters no incidental catch species for the first two days of the trip, and therefore decides to "top off" on day three. Under the status quo, the vessel triggered a new fishing trip on day two. Because their basis species catch from day one occurred during a different fishing trip, the vessel is only able to use the 10 mt of basis species from day two when calculating their MRA for trip B. Therefore, the vessel may keep only 3 mt of incidental catch species, and discard any volumes over the MRA. Under Alternative 3, the vessel would not trigger a new trip on day two, and is therefore allowed to use all 20 mt of basis species catch volume to calculate the MRA. Therefore, the vessel is able to keep 6 mt of incidental catch. Alternative 3 would decrease the vessel's discards, increase retention, and eliminate the unused MRA volume present in Trip A under Alternative 1.

Table 5-3: Scenario 2: Low incidental catch volumes throughout voyage

		Basis Species Catch Volume	MRA	Incidental Catch Species Volume	Retained Incidental Catch	Discarded Incidental Catch
Status Quo: 3 trips	Trip A (Day 1)	10 mt	3 mt	0 mt	0 mt	0 mt
	Trip B (Day 2)	10 mt	3 mt	0 mt	0 mt	0 mt
	Trip B (Day 3)	*0 mt*	*3 mt*	*6 mt*	*3 mt*	*3 mt*
	Voyage Total	**20 mt**	**6 mt**	**3 mt**	**3 mt**	**3 mt**
Alternative 3: 1 Trip	Trip A (Day 1)	10 mt	3 mt	0 mt	0 mt	0 mt
	Trip A (Day 2)	10 mt	6 mt	0 mt	0 mt	0 mt
	Trip A (Day 3)	*0 mt*	*6 mt*	*6 mt*	*6 mt*	*0 mt*
	Voyage Total	**20 mt**	**6 mt**	**6 mt**	**6 mt**	**0 mt**
Impact of Alt. 3:			**-3 mt unused MRA**		**+3 mt retained**	**-3 mt discarded**

As exemplified in this scenario, this Alternative has a positive economic impact when a vessel has unused MRA at the end of a fishing trip under the status quo. However, if the vessel was able to harvest up to the MRA under Alternative 1, then Alternative 3 would have no economic impact on that vessel.

Impacts on Vessel Behavior Around Protection Areas

Under the status quo, a new fishing trip is triggered once a C/P or mothership enters or leaves an area with a different fishing prohibition. This trigger was put in place to support the management goal of ensuring prey availability in protected areas (i.e. Steller sea lion protection measures to prevent localized depletion near haulouts and rookeries), and acts as a deterrent to targeting species closed to directed fishing (i.e. pollock, Pacific cod and Atka mackerel). The fishing prohibition area trigger ensures that vessels cannot use basis species caught in other areas to count towards MRA calculations in these protection areas.

As described in the previous section, often vessels will top-off on certain high value species in order to harvest as close as possible to the MRA. If the fishing prohibition area trigger was eliminated, a C/P or CV delivering to a mothership could enter an area closed to directed fishing for a species, target that species, and still be under the MRA for that species. This would enable vessels to effectively target protected species in areas closed to that species, and retain greater amounts of protected species based on the high volume of basis species accumulated during the rest of the fishing trip. In this scenario, the retention of species closed to directed fishing would be measured against the total basis species harvested since the previous offload, instead of only the basis species retained within the closed area boundary.

If the selected fishing trip triggers were removed, which would effectively create offload-to-offload trip lengths, without additional regulatory changes a vessel would be restricted to the lowest MRA for the duration of the fishing trip when the vessel has fished in an area closed to directed fishing.[18] Under the current MRA regulations a new fishing trip is automatically triggered when a vessel enters an area with a different directed fishing prohibition. As a result, it is possible to restrict the vessel to the lowest MRA for the duration of the fishing trip because once the vessel moves out of that area a new fishing trip begins. If a fishing trip was defined from offload to offload without further regulatory changes, then the lowest MRA would apply if the vessel moved to an area with a different directed fishing prohibition from the time they left the dock until they offloaded the product onboard. This is consistent with OLE's guidance for CVs, which is described under Section 5.2.5.

Vessel behavior around protection areas could change under Alternative 3. Depending on the volume and composition of species the vessel has already harvested, and their expectations of valuable incidental catch concentration inside protection areas, a vessel may either be incentivized or disincentivized to enter a protection area during a voyage[19]. In select cases where entering a protection area is unavoidable, it is possible that the positive economic impact of this alternative may be constrained, reduced, or eliminated.

The following scenarios (3a and 3b) have been highlighted as examples of the impacts Alternative 3 will have in terms of the change in retention and discard volumes within or directly outside protection areas. These scenarios suggest that vessel behavior and incentives (either to engage in targeted fishing in protection areas, or avoid protection areas) will largely depend on catch volumes and composition prior to entering that protection area. The ability to retain additional volumes of incidental catch could incentivize a vessel to enter closed areas to engage in targeted fishing for incidental species, if they have not already

[18] Current regulations at § 679.20(e)(3)(ii): *"For catcher/processors fishing in an area closed to directed fishing for a species or species group, the maximum retainable amount for that species or species group applies at any time for the duration of the fishing trip."*

[19] A similar 2009 rule was withdrawn because of the potential to incentivize increased harvest of incidental catch in Steller sea lion protection areas: https://www.federalregister.gov/documents/2009/12/10/E9-29475/fisheries-of-the-exclusive-economic-zone-off-alaska-maximum-retainable-amounts-for-non-american

retained a volume of that species in an open area that would be greater than their MRA would be in the closed area.

Under both scenarios, area A is fully open for directed fishing, and area B is closed for directed fishing for species B. Species B has an MRA set at 30% of the basis species volume.

In scenario 3a, the vessel has harvested 10 mt of species A, and 0 mt of species B in the area fully open for directed fishing. Under the status quo, a new trip is triggered upon moving into area B. The vessel may only use the volume of basis species caught within area B in their MRA calculations for species B. In the same scenario, under Alternative 3, the vessel would not trigger a new trip upon crossing the boundary of area B. Therefore, all basis species aboard the vessel, including the 10 mt of species A harvested in area A, could be used in the MRA calculation to determine the volume of species B they are able to retain. Therefore, the vessel could retain additional volumes of species B from area B than they were under the status quo.

Table 5-4: Scenario 3a: Moving from Open Area (Area A) to Protection Area (Area B)

		Species A Catch Volume	MRA for Species B	Species B Catch Volume	Retained Species B	Discarded Species B
Status Quo: 2 trips	Trip A (Area A)	10 mt	NA	0 mt	0 mt	0 mt
	Trip B (Area B)	10 mt	3 mt	6 mt	3 mt	3 mt
	Voyage Total	**20 mt**	**3 mt + Area A volume**	**6 mt**	**3 mt**	**3 mt**
Alternative 3: 1 Trip	Trip A (Area A)	10 mt	3 mt	0 mt	0 mt	0 mt
	Trip A (Area B)	10 mt	3 mt	6 mt	6 mt	0 mt
	Voyage Total	**20 mt**	**6 mt**	**6 mt**	**6 mt**	**0 mt**
Impact of Alt. 3:					**+3 mt retained**	**-3 mt discarded**

In some cases, the removal of the area closure trip trigger may disincentivize vessels from entering protection areas, because entrance into those areas would lead to additional discarding when compared to the status quo. If a vessel enters a protection area at any point during their trip, they are then limited by the lowest MRA for the entire fishing trip. If a vessel has not entered a protection area during their entire trip, they are not bound to the MRA and are free to engage in directed fishing for species that may otherwise be subject to area closures. However, under Alternative 3, if a vessel enters a protection area at any point between offloads, they would be bound to that MRA for the entirety of the trip. This could be a disincentive for vessels to enter protection areas, if they would otherwise engage in directed fishing for that species. In cases where vessels cannot avoid protection areas, Alternative 3 may lead to increased regulatory discards, if the total catch volume of that species between offloads under the status quo is greater than the lowest MRA encountered during the trip.

Scenario 3b provides a simplified example of how Alternative 3 could lead to increased regulatory discards in certain cases. As in the previous scenario, area A is fully open for directed fishing, and area B is closed for directed fishing for species B. Species B has an MRA set at 30% of the basis species volume.

Under the status quo, a separate trip is triggered when the vessel enters area A. Upon crossing the area boundary into an area fully open for directed fishing, the vessel is not constrained by any MRAs for species A or B, and is able to engage in directed fishing for species B. The vessel is able to retain the full MRA for species B that they harvested in area B, as well as the full volume of species B that they harvest in the open area (3 mt + 10 mt, in this example). Under Alternative 3, the vessel would not trigger a new

trip upon entering area A, and would be constrained by the MRA for species B for the entirety of their trip. This vessel would have to discard any volume of species B that would exceed the MRA of 30%. In this example, the vessel would be required to discard 7 mt of species B that they caught in an area fully open for directed fishing for species B.

Table 5-5: Scenario 3b: Moving from Protection Area (Area B) to Open Area (Area A)

		Species A Catch Volume	MRA for Species B	Species B Catch Volume	Retained Species B	Discarded Species B
Status Quo: 2 trips	Trip 1 (Area B)	10 mt	3 mt	3 mt	3 mt	0 mt
	Trip 2 (Area A)	10 mt	NA*	10 mt	10 mt	0 mt
	Voyage Total	**20 mt**	**3 mt + Area B volume**	**13 mt**	**13 mt**	**0 mt**
Alternative 3: 1 Trip	Trip 1 (Area B)	10 mt	3 mt	3 mt	3 mt	0 mt
	Trip 1 (Area A)	10 mt	3 mt	10 mt	3 mt	7 mt
	Voyage Total	**20 mt**	**6 mt**	**13 mt**	**6 mt**	**7 mt**
Impact of Alt. 3:					**-7 mt retained**	**+7 mt discarded**

5.4 Alternative 4 – Add Additional Species to an Offload-to-Offload

This alternative would add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors. The alternative would continue to exclude AFA vessels for BSAI pollock and BS Atka mackerel from the offload calculation. There are two options under consideration:

> Option 1: Add BSAI Pacific cod, GOA Pacific cod, GOA pollock, BS skates, Central GOA Rockfish Program, and GOA shallow-water flatfish
>
> Option 2: Include all groundfish species, except as noted above[20]

Under current regulations, it is unlawful for a vessel to exceed the MRA at any time during a fishing trip as defined in 50 CFR 679.2. The current MRA regulations appear to be most difficult for operators at the beginning of a fishing trip when vessels do not have significant amounts of the basis species on board to retain incidental caught species of value that are closed to directed fishing. If a vessel catches a percentage of incidental catch species that exceeds the MRA for the basis species currently on board, the portion of the incidental catch species exceeding the MRA must be discarded, which is called regulatory discards. Many of these incidental caught species are valuable. Later in the trip, after sufficient amounts of the basis species have been caught, it is more likely that a vessel will have enough of the basis species on board to accommodate catch that includes incidental catch of an MRA species without being required to discard that incidental species. The purpose of this alternative is to reduce regulatory discards by

[20] Option 2 excludes the species noted within the main text of Alternative 4 - BSAI pollock and BS Atka mackerel, for AFA vessels.

calculating retention of MRA species at the time of offload while at the same time does not increase the catch of MRA species above the MRA.

Currently BSAI pollock (§ 679.20(e)(3)(iii)) and BS Atka mackerel (§ 679.20(e)(3)(v)) MRAs are calculated from offload to offload and do not have instantaneous MRAs for non-AFA vessels. Instead, MRAs are only calculated at the time of offload. The purpose of this exception is to reduce regulatory discards of pollock and BS Atka mackerel. In addition, MRAs for C/Ps fishing under a Central GOA rockfish cooperative fishing quota (CQ) permit in the Central GOA are calculated at the end of each weekly reporting area (§ 679.20(e)(3)(iv)) and are based on the basis species harvested since the previous reporting period.

Outside of non-AFA BSAI pollock and BS Atka mackerel, there is currently no definition of "offload" (see 679.20(e)(3)(iii) and (v)). When expanding the definition of offload for all other sectors and species in both the BSAI and GOA it is common practice for a CV to offload to multiple processors, especially the practice of offloading the basis species at one processor and the incidental catch at another.

Modifying the MRA management period to an offload-to-offload period in the BSAI and GOA would allow groundfish vessels that would have otherwise been forced to discard valuable groundfish species caught incidentally while directed fishing due to exceeding the MRA to retain these incidentally caught groundfish species as long as they were under the MRA percentage at the time of offload. The overall economic impact of changing the MRA management period for all groundfish species in the BSAI and GOA is expected to be positive since vessels would no longer be required to discard valuable incidental catch of species that are closed to directed fishing if insufficient basis species are not onboard the vessel. Vessels would likely retain an amount of valuable incidental caught species that are closed to directed fishing that would at the time of offloading have sufficient basis species on onboard to meet the MRA requirements for that retained incidentally caught species. There is some potential for vessels to miscalculate the MRA accounting of required basis species for the amount of incidentally caught species prior to offloading that may require some discarding of valuable incidental caught species just prior to offloading. However, this mismatching of basis species to incidental species will likely be limited since vessels will be reluctant to discard valuable incidental caught species.

The main factors that would increase economic impact for all vessels are the values of the incidental catch species relative to the value of the basis species retained by the vessel, the cost and logistics of retaining and delivering a marketable fishery product, and the strategic behavior of individual vessels. If the incidental catch species has a lower value than the basis species, the change in the management period is unlikely to have any significant economic effect—vessels will continue to discard incidental catch species at current levels. If the incidental catch species has a higher relative value than the basis species, the impact from changing the management period could be an economic positive. Under Alternative 1, there is the potential for vessels to discard valuable incidental caught groundfish species that are closed to directing fishing during the early part of the fishing trip until they have harvested and retained sufficient amounts of basis species to build up a "ballast" of retained product they can count retained valuable incidental catch against. Then later in the fishing trip they can also "top off" on valuable incidental catch if they wish since the vessel has sufficient basis species to support the additional top off species. Thus, under Alternative 1, there is the potential for higher amounts of regulatory discards early in the trip relative to proposed Alternative 4 offload-to-offload MRA calculation period. With the change in regulation, vessels will have the option to keep the valuable incidental catch species in the early part of the fishing trip, even if they have not yet caught and retained sufficient basis species to comply with the MRA. Because they are able to keep valuable incidental catch species as it comes on board, there is unlikely to be a need to "top off" later in the trip. Thus, the proposed action may reduce overall catch of valuable incidental catch species through reduced discards.

5.4.1 Option 1 - Apply BSAI Pacific Cod, GOA Pacific Cod, GOA Pollock, BS Skates, Central GOA Rockfish Program, and GOA Shallow-Water Flatfish MRAs at Offload

BSAI Pacific cod

The most recent description of the BSAI Pacific cod species is contained in the SAFE report for the Groundfish Resources of the BSAI (NPFMC, 2024d). Table 3-1 summarizes the BSAI TACs, ABCs, and OFLs from 2020 through 2024 for all groundfish including Pacific cod. Once the TACs are established, regulations at § 679.20(a)(7)(i) allocate 10.7 percent of the Bering Sea Pacific cod TAC and 10.7 percent of the Aleutian Islands Pacific cod TAC to the CDQ Program for the exclusive harvest by Western Alaska CDQ groups. The remaining portion of TAC after deducting the 10.7 percent allocation for CDQ Program is the initial TAC (ITAC). For the HAL and pot gear sectors, NMFS estimates an incidental catch allowance (ICA) that will be deducted from the aggregate portion of Pacific cod TAC allocated to the HAL and pot gear sectors before the allocations to these sectors.

After subtraction of the CDQ allocation from the BS and AI TACs, NMFS combines the remaining BS and AI TACs into one BSAI non-CDQ TAC, which is available for harvest by nine non-CDQ fishery sectors. Regulations at § 679.20(a)(7)(ii)(A) define the nine Pacific cod non-CDQ fishery sectors in the BSAI and specify the percentage allocated to each. The non-CDQ fishery sectors are defined by a combination of gear type (e.g., trawl, HAL), operation type (i.e., CV or C/P), and vessel size categories (e.g., vessels greater than or equal to 60 ft in length overall). Through the annual harvest specifications process, NMFS allocates an amount of the combined BSAI non-CDQ TAC to each of these nine non-CDQ fishery sectors based on the following Amendment 85 percentages:

- Jig – 1.4%
- HAL/Pot CV < 60’ – 2 %
- HAL CV ≥ 60’ – 0.2%
- HAL C/P – 48.7%
- POT CV ≥ 60’ – 8.4%
- Pot C/P – 1.5%
- AFA Trawl C/P – 2.3%
- Non-AFA Trawl C/P – 13.4%
- Trawl CV – 22.1%

Presently, the Pacific cod stock is exploited by a multiple-gear fishery, including trawl, longline, pot, and jig components (although catches by jig gear are very small in comparison to the other three main gear types, with an average annual catch of less than 200 mt since 1991) and is a fully utilized fishery. Table 3-6 through Table 3-11 provides the average total catch of all BSAI groundfish including Pacific cod for the A80, AFA C/P, trawl CV, HAL C/P, HAL CV, and pot sectors from 2020 through 2024.

Amendment 49, which mandated increased retention and utilization of BSAI Pacific cod, was implemented in 1998. From 1991-1997, discard rates in the BSAI Pacific cod fishery averaged about 14%. Since then, they have averaged about 2% overall. Focusing on the more recent five years (2020-2024) at a sector level, the full retention requirement for BSAI Pacific cod, except in the case of regulatory discards above the 20 percent MRA retention rates, has resulted in extremely high retention rates as reflected in Table 3-6 through Table 3-11 and in Table 5-6, which shows an average retention of ranging between 89 percent for AFA C/Ps and 99.9 percent for the pot sector during 2020 through 2024. The MRA for BSAI Pacific cod as incidental catch species is 20 percent for all basis species.

The average exvessel price for Pacific cod during 2020 through 2023, which is provided in Tables 3-6 through 3-11 and in Table 5-6, ranged from $778 per mt for the trawl CV sector to $931 per mt for the pot sector. The average first wholesale gross price from 2020 through 2023 ranged from $1,719 mt for the AFA C/P sector to $1,980 per mt for the HAL C/P sector.

BSAI Pacific cod is caught as incidental catch in the yellowfin sole, pollock, rex sole, Atka mackerel, and flathead sole target fisheries. The A80 sector has the highest incidental catch of Pacific cod during 2020 through 2024 which is reflected in the yellowfin sole followed by rock sole (Table 5-7 and Table 3-12). However, since A80 is allocated 13.4 percent of the BSAI Pacific cod allocation to the sector as part of the A80 cooperative, the BSAI Pacific cod fishery for the sector remains open throughout the year and therefore incidentally caught Pacific cod in other groundfish fisheries is not restricted by MRAs. Additionally, since the Pacific cod Trawl Cooperative (PCTC) Program remains open throughout the A and B season for the trawl CV sector, Pacific cod caught by the trawl CV sector in other groundfish fisheries is not restricted by MRAs. BSAI Pacific cod MRAs do apply during the C season if during that season the fishery is closed to directed fishing for the trawl CV sector. All other sectors are required to discard BSAI Pacific cod above the MRA when the BSAI Pacific cod directed fishery for the sector is closed. As noted in Table 5-7 the AFA C/P sector had high incidental catch of BSAI Pacific cod in the pollock and yellowfin sole fisheries and is nearly all retained by the sector. The HAL C/P, HAL CV, and pot sectors target BSAI Pacific cod along with above 90 percent retention rates but have very little incidental catch.

As noted above, BSAI Pacific cod does have high retention rates amongst all of the sectors. Nevertheless, some portion of the BSAI Pacific cod species is incidental to other groundfish fisheries and is discarded. It is likely that some portion of the discarded incidentally caught Pacific cod is due to exceeding the MRA limits for BSAI Pacific cod while directing on the different groundfish fisheries. As a result, it is likely there would be some potential benefit from reduced regulatory discards and increased economic revenue under an offload to offload MRA calculation when compared to Alternative 1 instantaneous MRA calculation. Additionally, since BSAI Pacific cod is an IR/IU species, the potential reduction in regulatory discards under this proposed action would match the original intent of the IR/IU regulations to minimize discarding of BSAI Pacific cod. Therefore, the overall economic impact of changing the MRA management period for BSAI Pacific cod is expected to be positive under Alternative 4, Option 1.

Table 5-6 Average BSAI Pacific cod value ($) in millions, price ($) per mt, total incidental catch (mt), total target catch (mt), total discarded catch (mt), retained catch as a percent of total catch, and total catch (mt) from 2020 through 2024 by groundfish sector

	Average 2020 through 2024							
Sector	Value[1] ($M)	Price per ton[2] ($)	Total incidental catch by target (mt)	Total targeted catch	Total discards (mt)	Total retained (mt)	Retained as % ot total catch	Total catch (mt)
A80	$32.11	$1,977	14,889	1,704	302	16,291	98.2%	16,593
AFA CP	$8.96	$1,719	4,182	765	689	4,258	86.1%	4,947
HAL CP	$134.84	$1,980	79	68,237	950	67,366	98.6%	68,316
Trawl CV	$19.74	$778	4,122	21,097	142	25,077	99.4%	25,219
HAL CV	$0.22	$918	1	195	5	191	97.6%	196
Pot	$17.09	$931	4	17,121	27	17,098	99.8%	17,125

Source: AKFIN; Source file: MRA_Overview (2-3-25)

[1] Average (2020-2023) value for CPs is first wholesale and for CVs is exvessel

[2] Average (2020-2023) price per mt is first wholesale for CPs and exvessel for CVs

Table 5-7 Average incidental catch (mt) by target fisheries and sectors for BSAI Pacific cod, 2020 through 2024

	Target fisheries														
Sectors	Alaska Plaice - BSAI	Arrowtooth Flounder	Atka Mackerel	Flathead Sole	Greenland Turbot - BSAI	Kamchatka Flounder - BSAI	Other Flatfish - BSAI	Other Species	Pollock - bottom	Pollock - midwater	Rock Sole - BSAI	Rockfish	Sablefish	Yellowfin Sole - BSAI	Total incidental catch by sector
A80	65	133	1,856	1,023	4	30	43	1	365	2	3,328	772	30	7,237	14,889
AFA CP	2	0	100	24	0	0	1	0	449	2,222	336	12	0	1,036	4,182
HAL CP	0	0	0	0	1	0	0	70	1	0	0	1	6	0	79
HAL CV	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
POT	0	0	0	0	0	0	0	0	0	0	0	0	3	0	4
TRW CV	3	0	395	32	0	0	0	0	326	2,468	152	74	0	672	4,122
Total incidental catch by target	70	133	2,351	1,080	5	30	44	72	1,142	4,691	3,816	859	41	8,945	23,277

Source: AKFIN; Source file: MRA_Overview (2-3-25)

GOA Pacific cod

Amendment 83 established sector allocations of Pacific Cod TAC for each gear and operation type in the Western and Central GOA Pacific cod fisheries starting in 2012 based on the following Western GOA and Central GOA allocations:

Western GOA

- HAL C/P – 19.8%
- HAL CV – 1.4%
- Pot – 38%
- Trawl C/P – 2.4%
- Trawl CV – 38.4%

Central GOA

- HAL C/P – 5.1%
- HAL CV < 50' – 14.6%
- HAL CV ≥ 50' – 6.7%
- Pot – 27.8%
- Trawl C/P – 4.2%
- Trawl CV – 41.6%

Presently, GOA Pacific cod stock is exploited by a multiple-gear fishery, including trawl, longline, and pot sectors. Table 3-2 summaries GOA Pacific cod TAC, ABC, and OFL from 2020 through 2024. Table 3-6 through Table 3-11 and Table 5-8 below show the average total catch for the period 2020 through 2024. During that period the trawl CV sector had the highest average total catch of GOA Pacific cod at 5,612 mt while the pot sector had the next highest average at 3,609 mt. The other sectors, HAL CV at 1,731 mt, HAL C/P at 1,514 mt, and A80 at 876 mt rounded out the remaining average catch of GOA Pacific cod during 2020 through 2024. Table 5-8 also provides total incidental catch, average total

targeted catch, discarded and retained catch and retained catch as a percent of total catch by sector. Of the sectors, the trawl CV sector had the highest average incidental catch of GOA Pacific cod at 3,068 mt while the A80 sector had an average incidental catch 876 mt during the 2020 through 2024 period. Of those two sectors, the highest average discards of GOA Pacific cod were in the A80 sector at 521 mt while the trawl CV sector average discards of Pacific cod were 247 mt. As noted in Table 5-9, fisheries with high incidental catch of GOA Pacific cod include pollock, arrowtooth flounder, rockfish, and shallow-water flatfish. Looking at average retained catch rate during 2020 through 2024, most sectors had a rate of over 90 percent with the exception of the A80 sector which had an average retention rate of 41 percent (Table 5-8). The MRA for GOA Pacific cod as incidental catch species is 20 percent for nearly all basis species.

As noted in Table 5-8, the average exvessel price for Pacific cod during 2020 through 2023 ranged from $804 per mt for the trawl CV sector to $906 per mt for the HAL CV sector. The average first wholesale gross price from 2020 through 2023 ranged from $828 per mt for the A80 sector to $2,367 per mt for the HAL C/P sector.

GOA Pacific cod does have high retention rates amongst most of the sectors. Nevertheless, some portion of the GOA Pacific cod species is likely incidental to other groundfish species and is discarded. Additionally, the A80 sector on average discarded 41 percent of their incidental caught GOA Pacific cod while directed fishing for GOA groundfish fisheries. It is likely that a large portion of the discarded incidentally caught Pacific cod by the A80 sector is regulatory discards due to exceeding the MRA limits for GOA Pacific cod. Given the high value of GOA Pacific cod, it is likely that under an offload to offload MRA calculation a large portion of the discarded incidental catch of GOA Pacific cod under the current instantaneous MRA calculation could be retained. This could reduce regulatory discards and increase revenue for those sectors with regulatory discards of GOA Pacific cod. Additionally, since GOA Pacific cod is an IR/IU species, the potential reduction in regulatory discards under this proposed action would match the original intent of the IR/IU regulations to minimize discarding of GOA Pacific cod. Therefore, the overall economic impact of changing the MRA management period for GOA Pacific cod is expected to be positive under Alternative 4, Option 1.

Table 5-8 Average GOA Pacific cod value ($) in millions, price ($) per mt, total incidental catch (mt), total target catch (mt), total discarded catch (mt), retained catch as a percent of total catch, and total catch (mt) from 2020 through 2024 by groundfish

	Average 2020 through 2024							
Sector	Value[1] ($M)	Price per ton[2] ($)	Total incidental catch by target (mt)	Total targeted catch	Total discards (mt)	Total retained (mt)	Retained as % ot total catch	Total catch (mt)
A80	$0.74	$828	876	0	521	355	40.5%	876
AFA CP	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HAL CP	$3.36	$2,367	8	1,506	24	1,490	98.4%	1,514
Trawl CV	$4.12	$804	3,068	2,544	247	5,365	95.6%	5,612
HAL CV	$1.42	$906	8	1,723	40	1,691	97.7%	1,731
Pot	$2.79	$899	9	3,600	18	3,591	99.5%	3,609

Source: AKFIN; Source file: MRA_Overview (2-3-25)

[1] Average (2020-2023) value for CPs is first wholesale and for CVs is exvessel

[2] Average (2020-2023) price per mt is first wholesale for CPs and exvessel for CVs

Table 5-9 Average incidental catch (mt) by target fisheries and sectors for GOA Pacific cod, 2020 through 2024

	Target fisheries									
Sectors	Arrowtooth Flounder	Flathead Sole	Other Species	Pollock - bottom	Pollock - midwater	Rex Sole - GOA	Rockfish	Sablefish	Shallow Water Flatfish - GOA	Total incidential catch by sector
A80	362	1	0	1	0	7	320	0	185	876
AFA CP	0	0	6	0	0	0	0	2	0	8
HAL CP	0	0	0	0	0	0	1	7	0	8
HAL CV	0	0	0	0	0	0	0	9	0	9
POT	0	0	0	0	0	0	0	3	0	3
TRW CV	344	0	0	2,251	151	0	146	20	155	3,068
Total incidental catch by target	**707**	**1**	**6**	**2,253**	**151**	**7**	**467**	**40**	**340**	**3,972**

Source: AKFIN; Source file: MRA_Overview (2-3-25)

GOA Pollock

The pollock target fishery in the GOA is entirely shore-based with approximately 99% of the total catch harvested by the trawl CV sector. Table 3-6 through Table 3-11 along with Table 5-10 below show the average total catch of GOA pollock for the period 2020 through 2024. These tables also provide average discarded and retained catch along with average retained catch as a percent of total catch by sector. Table 3-2 provides the GOA pollock TAC, ABC, and OFL from 2020 through 2024. From 2020 through 2024, the trawl CV sector had the highest average total catch of GOA pollock at 116,619 mt while the A80 sector had the next highest average at 1,621 mt.

As noted in Table 5-11, fisheries with incidental catch of GOA pollock include rockfish, arrowtooth flounder, Pacific cod, shallow-water flatfish, sablefish, flathead sole, and rex sole. Of these fisheries, the rockfish fishery had the highest average incidental catch of GOA pollock at 1,682 mt during the 2020 through 2024 period while the total average incidental catch of pollock was 2,441 mt during this same period. Of the sectors, A80 sector had the largest average incidental catch of GOA pollock at 1,494 mt. The average retained catch rate during 2020 through 2024 ranged from 36 percent for HAL CV sector which had an average total catch of 11 mt to a high of 99 percent for trawl CV sector. (Table 5-10). The average exvessel price for GOA pollock during 2020 through 2023 for the trawl CV sector is $302 per mt. The MRA for GOA pollock as incidental catch species is 20 percent for nearly all basis species.

Looking at the average GOA pollock discards during 2020 through 2024, the trawl CV sector had the highest at 838 mt followed by the A80 sector at 428 mt. It is likely that some portion of these discards are regulatory discards due to the vessels exceeding the MRA for GOA pollock while fishing under an instantaneous calculation period. Given the value of GOA pollock, there is likely some benefit from reduced regulatory discards of GOA pollock and increased economic revenue under an offload to offload MRA calculation when compared to the instantaneous MRA calculation under Alternative 1. Additionally, since GOA pollock is an IR/IU species, the potential reduction in regulatory discards under this proposed action would match the original intent of the IR/IU regulations to minimize discarding of GOA pollock. Therefore, the overall economic impact of changing the MRA management period for GOA pollock is expected to be positive under Alternative 4, Option 1.

Table 5-10 Average GOA pollock value ($) in millions, price ($) per mt, total incidental catch (mt), total target catch (mt), total discarded catch (mt), retained catch as a percent of total catch, and total catch (mt) from 2020 through 2024 by groundfish

	Average 2020 through 2024							
Sector	Value[1] ($M)	Price per ton[2] ($)	Total incidental catch by target (mt)	Total targeted catch	Total discards (mt)	Total retained (mt)	Retained as % ot total catch	Total catch (mt)
A80	$0.56	$399	1,493	128	428	1,193	73.6%	1,621
AFA CP	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HAL CP	$0.01	$502	14	0	2	12	85.8%	14
Trawl CV	$34.71	$302	918	115,701	838	115,781	99.3%	116,619
HAL CV	$0.00	$112	11	0	7	4	36.4%	11
Pot	$0.00	$299	2	0	1	1	61.9%	2

Source: AKFIN; Source file: MRA_Overview (2-3-25)

[1] Average (2020-2023) value for CPs is first wholesale and for CVs is exvessel

[2] Average (2020-2023) price per mt is first wholesale for CPs and exvessel for CVs

Table 5-11 Average incidental catch (mt) by target fisheries and sectors for GOA pollock, 2020 through 2024

	Target fisheries								
Sectors	Arrowtooth Flounder	Flathead Sole	Other Species	Pacific Cod	Rex Sole - GOA	Rockfish	Sablefish	Shallow Water Flatfish - GOA	Total incidential catch by sector
A80	207	14	0	0	6	1,170	0	97	1,494
AFA CP	0	0	0	14	0	0	0	0	14
HAL CP	0	0	0	11	0	0	0	0	11
HAL CV	0	0	0	2	0	0	0	0	2
POT	0	0	0	1	0	0	0	0	1
TRW CV	213	0	0	138	0	512	29	26	918
Total incidental catch by target	**420**	**14**	**0**	**166**	**6**	**1,682**	**29**	**123**	**2,441**

Source: AKFIN; Source file: MRA_Overview (2-3-25)

BSAI Skates

Table 3-1 summarizes the BSAI TAC, ABC, and OFL for skates from 2020 through 2024. BSAI skate stock complex is managed in aggregate, with a single set of harvest specifications applied to the entire complex and are managed as an incidental catch allowance (ICA). Since BSAI stakes are managed as an incidental catch allowance (ICA), the species is closed to directed fishing for the year and the MRA for skates apply. The MRA for BSAI skates, which is aggregated with the other species complex, is 20 percent for most basis species, but is 3 percent for arrowtooth flounder and Kamchatka flounder. Table 3-6 through Table 3-11 provide the annual total catch for skates for the period 2020 through 2024. During this period, the average total catch for skates was 23,904 mt. The sector with highest average total catch of skates during 2020 through 2024 was the HAL C/P at 18,552 mt, which accounted for 78 percent of the average total catch during this period. The only other sector with greater than 5 percent of the average total catch of BSAI skates was the A80 sector which had an average total catch of BSAI skates of 4,087 mt which accounted for 17 percent of the total.

Retention of BSAI skates is low as reflected in Table 5-12. Information in the table shows that A80, AFA C/P, HAL C/P, and trawl CV sectors on average retained either less than 50 percent or slightly above 50 percent of their average total catch of skates. As noted in Table 5-13, most of the incidental catch of BSAI skates is in the HAL C/P fishery Pacific cod fishery at 18,493 and in the A80 yellowfin sole fishery at 2,203 mt. Looking at the average BSAI skate incidental discards during 2020 through 2024, the HAL C/P sector had the highest at 9,231 mt followed by the A80 sector at 2,699 mt. Given the high portion of discards of BSAI skates, it is likely that a large portion of these discards are regulatory discards due to the vessels exceeding the 20 percent MRA while targeting BSAI Pacific cod and yellowfin sole under an instantaneous calculation period. As noted in Table 5-12, the average exvessel price for BSAI skates from 2020 through 2023 was $281 per mt for HAL C/P sector, $236 per mt for the AFA C/P sector, and $168 per mt per pound for the A80 sector. Therefore, modifying the management period for BSAI skates to an offload-to-offload period under the proposed action would allow vessels that would have otherwise been forced to discard valuable BSAI skates with insufficient basis species on board the vessel under an instantaneous MRA calculation period, would now have the opportunity to retain some portion of the valuable regulatory discards. The ability to retain BSAI skates that would otherwise be discarded under status quo would likely reduce regulatory discards and increase revenue for those sectors with BSAI skate markets. Therefore, the overall economic impact of changing the MRA management period for BSAI skates is expected to be positive under Alternative 4, Option 1.

Table 5-12 Average BSAI skates value ($) in millions, price ($) per mt, total incidental catch (mt), total target catch (mt), total discarded catch (mt), retained catch as a percent of total catch, and total catch (mt) from 2020 through 2024 by groundfish sector

	Average 2020 through 2024							
Sector	Value[1] ($M)	Price per ton[2] ($)	Total incidental catch by target (mt)	Total targeted catch	Total discards (mt)	Total retained (mt)	Retained as % of total catch	Total catch (mt)
A80	$0.71	$168	4087	0	2,699	1,388	34.0%	4,087
AFA CP	$0.17	$236	648	0	372	276	42.6%	648.0
HAL CP	$4.93	$281	18,552	0	9,231	9,321	50.2%	18,552
Trawl CV	$0.02	$33	556	0	263	293	52.7%	556
HAL CV	$0.00	$0	61	0	61	0	0.0%	61
Pot	$0.00	$0	0	0	0	0	100.0%	0

Source: AKFIN; Source file: MRA_Overview (2-3-25)

[1] Average (2020-2023) value for CPs is first wholesale and for CVs is exvessel

[2] Average (2020-2023) price per mt is first wholesale for CPs and exvessel for CVs

Table 5-13 Average incidental catch (mt) by target fisheries and sectors for BSAI skates, 2020 through 2024

	Target fisheries															
Sectors	Alaska Plaice - BSAI	Arrowtooth Flounder	Atka Mackerel	Flathead Sole	Greenland Turbot - BSAI	Kamchatka Flounder - BSAI	Other Flatfish - BSAI	Other Species	Pacific Cod	Pollock - bottom	Pollock - midwater	Rock Sole - BSAI	Rockfish	Sablefish	Yellowfin Sole - BSAI	Total incidental catch by sector
A80	30	207	335	533	22	150	22	4	29	70	0	260	197	24	2,203	4,087
AFA CP	0	0	11	21	0	0	0	1	10	40	301	12	1	0	250	648
HAL CP	0	0	0	0	8	0	0	44	18,493	0	0	0	1	5	0	18,552
HAL CV	0	0	0	0	0	0	0	0	31	0	0	0	0	30	0	61
POT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TRW CV	0	0	43	8	0	0	0	0	138	18	189	6	18	0	137	556
Total incidental catch by target	**31**	**207**	**389**	**562**	**30**	**150**	**22**	**48**	**18,701**	**129**	**490**	**278**	**217**	**59**	**2,590**	**23,903**

Source: AKFIN; Source file: MRA_Overview (2-3-25)

GOA Shallow-water flatfish

GOA shallow-water flatfish stock complex includes Alaska plaice (Pleuronectes quadrituberculatus), butter sole (Pleuronectes isolepis), English sole (Parophrys vetulus), sand sole (Psettichthys melanostictus), starry flounder (Platichthys stellatus), yellowfin sole (Pleuronectes asper), northern rock sole (Lepidopsetta polyxstra), and southern rock sole (Lepidopsetta bilineata). Table 3-2 summaries GOA shallow-water flatfish TAC, ABC, and OFL from 2020 through 2024. Table 3-6 through Table 3-11 show the average total catch of shallow-water flatfish for the period 2020 through 2024. Shallow-water flatfish are generally harvested by the trawl CV sector and the A80 sector (Table 5-14). As noted in Table 5-14, the fixed gear sectors caught less than 1 percent of the combined 2020 through 2024 average total catch. The average retention of shallow-water flatfish was less than one percent for fixed gear sectors, 71 percent for the trawl CV sector, and 87 percent for the A80 sector from 2020 through 2024 (Table 5-14).

Of the GOA shallow-water flatfish caught during 2020 through 2024, most were caught in the target fishery, but the pollock, arrowtooth flounder, and Pacific cod fishery also caught shallow-water flatfish in large numbers as incidental catch. Looking at the average GOA shallow-water flatfish discards during 2020 through 2024, the trawl CV and A80 sectors had the highest at 377 mt and 130 mt. During 2020 through 2024, the average shallow-water flatfish exvessel price for the trawl CV sector was $252 per mt while the average first wholesale price for the A80 sector was $704 per mt (Table 5-14). Given the value of shallow-water flatfish, there is a potential that some portion of these average shallow-water flatfish discards by the trawl CV and A80 sectors during the 2020 through 2024 period are regulatory discards due to exceeding the 20 percent MRA for shallow-water flatfish while fishing under an instantaneous calculation period in other groundfish fisheries. Therefore, modifying the management period for GOA shallow-water flatfish to an offload-to-offload period under the proposed action would allow vessels that would have otherwise been forced to discard GOA shallow-water flatfish under an instantaneous MRA calculation period due to not enough basis species onboard the vessel would now have the opportunity to retain this valuable regulatory discarded catch. The ability to retain GOA shallow-water flatfish that would otherwise be discarded under status quo would likely reduce regulatory discards and increase revenue for those sectors that catch GOA shallow-water flatfish incidentally. Therefore, the overall economic impact of changing the MRA management period for GOA shallow-water flatfish is expected to be positive under Alternative 4, Option 1.

Table 5-14 Average GOA shallow-water flatfish value ($) in millions, price ($) per mt, total incidental catch (mt), total target catch (mt), total discarded catch (mt), retained catch as a percent of total catch, and total catch (mt) from 2020 through 2024 by groundfish sector

	Average 2020 through 2024							
Sector	Value[1] ($M)	Price per ton[2] ($)	Total incidental catch by target (mt)	Total targeted catch	Total discards (mt)	Total retained (mt)	Retained as % ot total catch	Total catch (mt)
A80	$0.85	$704	62	906	130	838	86.6%	968
AFA CP	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
HAL CP	$0.00	$0	3	0	3	0	0.0%	3
Trawl CV	$0.23	$252	826	476	377	925	71.0%	1,302
HAL CV	$0.00	$0	4	0	4	0	0.0%	4
Pot	$0.00	$0	5	0	5	0	0.0%	5

Source: AKFIN; Source file: MRA_Overview (2-3-25)

[1] Average (2020-2023) value for CPs is first wholesale and for CVs is exvessel

[2] Average (2020-2023) price per mt is first wholesale for CPs and exvessel for CVs

Table 5-15 Average incidental catch (mt) by target fisheries and sectors for GOA shallow-water flatfish, 2020 through 2024

Sectors	Target fisheries: Arrowtooth Flounder	Flathead Sole	Other Species	Pacific Cod	Pollock - bottom	Pollock - midwater	Rex Sole - GOA	Rockfish	Sablefish	Total incidential catch by secto
A80	29	1	0	0	1	0	12	18	0	61
AFA CP	0	0	0	3	0	0	0	0	0	3
HAL CP	0	0	0	3	0	0	0	0	1	4
HAL CV	0	0	0	3	0	0	0	0	3	5
POT	0	0	0	3	0	0	0	0	3	5
TRW CV	234	0	0	124	157	295	0	13	3	825
Total incidental catch by target	**263**	**1**	**0**	**132**	**158**	**295**	**12**	**32**	**10**	**906**

Source: AKFIN; Source file: MRA_Overview (2-3-25)

Central GOA Rockfish Program

The Central GOA Rockfish Program assigns quota shares (QS) to License Limitation Program (LLP) licenses for rockfish primary and secondary species based on legal landings associated with that LLP. Primary rockfish species are northern rockfish, Pacific ocean perch, and dusky rockfish. Secondary rockfish species are Pacific cod, rougheye rockfish, shortraker rockfish, sablefish, and thornyhead rockfish. First implemented under the Rockfish Pilot Program from 2007 through 2011, the Central GOA Rockfish Program was implemented in 2012 and reauthorized in 2021. The program, like its predecessor, allocates exclusive harvest privileges to a specific group of LLP license holders who use trawl gear to target the primary rockfish species.

C/Ps fishing under a rockfish CQ permit in the Central GOA, unlike most other sectors and fisheries which operate under an instantaneous MRA calculation period, operate under a weekly reporting period MRA calculation. However, CVs fishing under a rockfish CQ permit in the Central GOA Rockfish Program operate under an instantaneous MRA calculation period. Under the proposed action, both C/Ps and CVs fishing under a rockfish CQ permit in the Central GOA, MRAs would instead be calculated from offload to offload period.

Table 5-16 provides the 2020 through 2023 CGOA Rockfish Program average first wholesale value and average exvessel price as well as average discarded, retained, retained catch as a percent of total catch, and total catch from 2020 through 2024. Table 5-16 provides CGOA Rockfish Program average incidental catch by species in the rockfish, Pacific cod, and sablefish target fisheries during the 2020 through 2024 period. The largest amount of incidental catch was pollock at 6,501 mt, arrowtooth flounder at 4,119 mt, and other rockfish at 2,876 mt in the target rockfish fishery during the 2020 through 2024 period. Of this incidental catch, an estimated 332 mt of pollock, 321 mt of arrowtooth flounder, and 172 mt of other rockfish were on average discarded during the 2020 through 2024 period (Table 5-17). It is likely that some portion of the discarded incidental catch from the CGOA Rockfish Program target fisheries could be regulatory discards if the incidental caught species were closed to directed fishing. The MRAs for these incidental catch species are 20 percent, 35 percent, and 15 percent, respectively. Given the average exvessel price for these incidentally caught species was $172 per mt for pollock, $73 per mt for arrowtooth flounder, and $139 per mt for other rockfish, some regulatory discards had modest

economic value. As noted in Table 5-16, the exvessel value of some of the incidental caught species that was required to be discarded likely results in lost revenue under the current MRA calculation period.

Taking into consideration the amount of discards and the value of the incidentally caught species in the CGOA Rockfish Program target fisheries, modifying the management period for the MRA calculations from the current end of each weekly reporting period for C/Ps and instantaneous for CVs under Alternative 1 to an offload-to-offload period under the proposed action has some potential to increase economic values for both types of vessels participating in the CGOA Rockfish Program and potential reduced regulatory discards of valuable incidental caught species. Specifically, the proposed action would allow C/P vessels that would have otherwise been forced to discard valuable CGOA Rockfish Program incidental catch under the current regulations due to having insufficient basis species onboard the vessel would now have the opportunity to retain these valuable discarded incidental species.

Table 5-16 CGOA Rockfish Program average first wholesale value ($) from 2020 through 2023, average exvessel price ($) per mt from 2020 through 2023, average total target catch (mt), average total discarded catch (mt), average retained catch as a percent of average total catch, and average total catch (mt) from 2020 through 2024 by groundfish sector

			Average catch 2020 through 2024			
FMP Area/Species	Average first wholesale value 2020-2023 ($M)*	Average ex-vessel price 2020-2023 ($ per mt)*	Discard (mt)	Retained (mt)	Retained catch as a % of total catch	Total (mt)
Arrowtooth Flounder	$742,169	$73	321	809	71.6%	1,130
Atka Mackerel	$196,092	$632	9	117	93.0%	126
GOA Skate, other	$6,311	$23	11	2	16.3%	13
Flathead Sole	$12,958	$57	16	22	57.9%	39
GOA Deep Water Flatfish	$1,317	$12	19	4	18.2%	24
GOA Dusky Rockfish	$2,740,235	$327	15	2,421	99.4%	2,437
GOA Rex Sole	$90,951	$187	13	66	84.0%	79
GOA Shallow Water Flatfish	$5,963	$63	19	17	47.7%	37
GOA Skate, Big	$40,844	$399	7	7	52.1%	14
GOA Skate, Longnose	$40,992	$319	18	8	30.5%	26
GOA Thornyhead Rockfish	$258,997	$994	7	83	91.9%	91
Northern Rockfish	$1,368,593	$264	6	1,250	99.5%	1,256
Octopus	$764	$157	1	0	15.2%	1
Other Rockfish	$552,495	$139	172	411	70.6%	583
Pacific Cod	$890,207	$562	139	391	73.8%	531
Pacific Ocean Perch	$25,209,019	$310	90	22,140	99.6%	22,230
Pollock	$632,524	$172	332	1,148	77.6%	1,480
Rougheye Rockfish	$94,121	$263	6	118	95.2%	124
Sablefish	$4,529,890	$2,715	4	795	99.5%	799
Sculpin	$444	$13	3	0	8.3%	3
Shark	$16,710	$6	21	4	15.0%	24
Shortraker Rockfish	$160,232	$353	18	100	84.5%	118
Total	$37,591,828	$359	1,247	29,916	96.0%	31,163

Source: AKFIN; Source file: MRA_Target_Program (2-14-25)
*As of publishing date 2024 value data is not yet available

Table 5-17 CGOA Rockfish Program average incidental catch (mt) for the rockfish, Pacific cod and sablefish target fisheries by species, 2020 through 2024

	Target fisheries			
Species	Pacific Cod	Rockfish	Sablefish	Species total
Arrowtooth Flounder	117	4,119	782	5,018
Atka Mackerel	0	569	0	569
GOA Skate, Other	3	46	11	61
Flathead Sole	1	173	10	184
GOA Deep Water Flatfish	3	77	28	107
GOA Rex Sole	3	344	27	374
GOA Shallow Water Flatfish	49	106	10	165
GOA Skate, Big	41	22	9	71
GOA Skate, Longnose	4	120	4	129
Octopus	0	3	0	3
Other Rockfish	1	2,876	2	2,879
Pollock	73	6,501	102	6,677
Rougheye Rockfish	2	502	26	530
Sculpin		15	0	15
Shark	9	96	14	118
Shortraker Rockfish	6	517	44	568
Target total'	**1,250**	**147,414**	**2,836**	**151,500**

Source: AKFIN; Source file: MRA_Target_Program (2-14-25)

Table 5-18 CGOA Rockfish Program average discarded incidental catch (mt) for the rockfish, Pacific cod and sablefish target fisheries by species, 2020 through 2024

	Target fisheries			
Species	Pacific Cod	Rockfish	Sablefish	Species total
Arrowtooth Flounder	112	677	728	1,517
Atka Mackerel	0	39	0	39
GOA Skate, Other	3	36	11	50
Flathead Sole	1	68	7	76
GOA Deep Water Flatfish	3	60	23	86
GOA Rex Sole	3	38	18	59
GOA Shallow Water Flatfish	37	37	5	78
GOA Skate, Big	28	4	2	34
GOA Skate, Longnose	0	88	1	89
Octopus	0	2	0	3
Other Rockfish	0	837	1	838
Pollock	66	1,310	88	1,464
Rougheye Rockfish	2	8	19	29
Sculpin		13	0	13
Shark	8	78	13	100
Shortraker Rockfish	5	49	38	92
Target total	**275**	**4,553**	**980**	**5,808**

Source: AKFIN; Source file: MRA_Target_Program (2-14-25)

5.4.2 Option 2 - Include all groundfish species, except as noted above[21]

As noted in Table 5-19 for all sectors combined and Table 3-6 through Table 3-11 for specific sectors, some of the more valuable incidental caught species that also have high retention rates include the following for the BSAI trawl gear: Greenland turbot, Pacific cod, sablefish, Alaska plaice, Kamchatka flounder, arrowtooth flounder, flathead sole, POP (directed), and pollock while for fixed gear vessels in the BSAI, Greenland turbot, Pacific cod, sablefish, pollock and skates for the HAL C/P sector specifically. GOA trawl species include sablefish, thornyhead rockfish, Pacific cod, Atka mackerel, rougheye rockfish, big skates, rex sole, and dusky rockfish shortraker rockfish while GOA fixed gear species include sablefish, Pacific cod, demersal shelf rockfish, thornyhead rockfish, rougheye rockfish, and shortraker rockfish. Table 5-20 and Table 5-21 show discarded catch by target fisheries for all sectors combined. It is likely most of these incidentally caught species when closed for directed fishing will be retained in greater proportion under an offload-to-offload MRA calculation period when compared to Alternative 1 which will result in higher economic value under Alternative 4, Option 2. Additionally, these same species will also likely see lower regulatory discards under an offload-to-offload MRA calculation period relative to Alternative 1.

[21] Option 2 excludes the species noted within the main text of Alternative 4 - BSAI pollock and BS Atka mackerel, for AFA vessels.

Table 5-19 Average first wholesale value ($) and exvessel price ($) for 2020 through 2023, and average discarded catch (mt), average retained catch (mt) and average total catch (mt) from 2020 through 2023 by FMP area and groundfish species for all sectors combined

FMP Area/Species	Average first wholesale value 2020-2023 ($)*	Average ex-vessel price 2020-2023 ($ per mt)*	Average catch 2020 through 2024			
			Discard (mt)	Retained (mt)	Retained catch as a % of total catch	Total (mt)
BSAI	**480,802,489**	$271	**44,023**	**1,730,291**	97.5%	1,774,313
Arrowtooth Flounder	2,557,626	$281	1,084	8,020	88.1%	9,104
Atka Mackerel	25,476,960	$402	763	62,662	98.8%	63,425
BSAI Alaska Plaice	3,701,883	$254	1,029	13,539	92.9%	14,568
BSAI Kamchatka Flounder	2,177,723	$315	226	6,697	96.7%	6,923
BSAI Other Flatfish	577,215	$186	1,799	1,306	42.1%	3,105
BSAI Shortraker Rockfish	109,505	$374	60	233	79.6%	292
Skate	1,337,063	$56	12,626	11,277	47.2%	23,903
Flathead Sole	2,770,358	$245	880	10,414	92.2%	11,293
Greenland Turbot	1,513,364	$1,017	58	1,431	96.1%	1,488
Northern Rockfish	1,493,744	$179	714	7,643	91.5%	8,358
Octopus	75,240	$255	207	88	29.9%	295
Other Rockfish	529,975	$447	458	728	61.4%	1,186
Pacific Cod	75,767,584	$572	1,996	130,399	98.5%	132,396
Pacific Ocean Perch	9,837,330	$268	1,488	35,236	95.9%	36,723
Pollock	299,474,762	$229	14,685	1,294,812	98.9%	1,309,496
Rock Sole	6,459,730	$279	984	22,141	95.7%	23,125
Rougheye Rockfish	80,900	$150	239	301	55.7%	541
Sablefish	12,360,717	$1,849	1,505	5,182	77.5%	6,687
Sculpin	2,145	$2	1,003	13	1.3%	1,016
Shark	297	$1	193	13	6.5%	206
Yellowfin Sole	34,498,369	$287	2,026	118,157	98.3%	120,183
GOA	**108,176,562**	**$536**	**8,061**	**193,847**	**96.0%**	**201,908**
Arrowtooth Flounder	999,049	$72	1,264	12,690	90.9%	13,954
Atka Mackerel	302,588	$463	60	594	90.8%	654
Skate	4,243	$12	310	46	12.9%	356
Flathead Sole	115,202	$123	92	846	90.2%	937
GOA Deep Water Flatfish	2,065	$20	69	32	31.4%	101
GOA Demersal Shelf Rockfish	34,187	$1,699	1	19	93.9%	20
GOA Dusky Rockfish	692,039	$259	66	2,609	97.5%	2,675
GOA Rex Sole	162,368	$253	48	594	92.6%	642
GOA Shallow Water Flatfish	338,136	$148	520	1,761	77.2%	2,281
GOA Skate, Big	189,170	$378	231	270	53.9%	501
GOA Skate, Longnose	73,729	$205	253	107	29.7%	360
GOA Thornyhead Rockfish	318,833	$1,133	24	258	91.6%	281
Northern Rockfish	396,469	$217	39	1,785	97.9%	1,823
Octopus	35,516	$367	50	47	48.4%	97
Other Rockfish	99,157	$127	295	484	62.1%	779
Pacific Cod	7,701,234	$577	850	12,493	93.6%	13,343
Pacific Ocean Perch	6,826,763	$246	908	26,841	96.7%	27,748
Pollock	27,985,703	$237	1,276	116,992	98.9%	118,267
Rougheye Rockfish	125,730	$331	55	325	85.5%	380
Sablefish	61,627,952	$3,952	889	14,706	94.3%	15,595
Sculpin	77	$1	80	1	1.1%	80
Shark	626	$1	585	18	3.0%	604
Shortraker Rockfish	145,727	$341	97	331	77.4%	428
Grand Total	**588,979,051**	**$298**	**52,083**	**1,924,138**	**97.4%**	**1,976,221**

Source: AKFIN; Source file: MRA_Overview (1-6-25)

*As of publishing date 2024 value data is not yet available

Table 5-20 Average discarded BSAI catch (mt) by target fisheries and groundfish species, 2020 through 2024

	Target													
Species	*Alaska Plaice - BSAI*	*Arrowtooth Flounder*	*Atka Mackerel*	*Flathead Sole*	*Greenland Turbot - BSAI*	*Kamchatka Flounder - BSAI*	*Other Flatfish - BSAI*	*Pacific Cod*	*Pollock*	*Rock Sole - BSAI*	*Rockfish*	*Sablefish*	*Yellowfin Sole - BSAI*	*Total species catch (mt)*
BSAI Alaska Plaice	6	0	0	18	0	0	0	5	3	128	0	0	868	1,029
Arrowtooth Flounder	0	77	32	77	3	22	7	470	30	20	109	40	198	1,084
Atka Mackerel	0	1	535	0	0	13	0	47	38	0	129	0	0	763
Flathead Sole	0	15	3	74	3	2	1	466	165	20	22	3	104	878
Greenland Turbot	0	2	2	2	5	13	0	15	2	0	6	8	2	58
BSAI Kamchatka Flounder	0	15	17	7	2	51	2	61	5	2	37	15	13	226
BSAI Other Flatfish	14	7	5	5	2	6	3	297	37	441	41	9	930	1,799
Pacific Cod	4	3	36	31	0	1	0	1,084	512	102	10	3	209	1,994
Pollock	109	97	149	1,483	8	81	9	946	1,406	2,826	660	16	6,895	14,684
Rock Sole	4	2	26	26	0	1	0	169	96	202	22	0	436	984
Pacific Ocean Perch	0	57	268	86	16	21	39	5	659	0	328	7	3	1,488
Sablefish	0	185	37	64	78	162	62	162	578	0	136	41	0	1,505
Yellowfin Sole	3	0	0	33	0	0	0	636	71	126	0	0	1,155	2,025
BSAI Skate	18	159	246	356	27	128	9	9,377	275	177	142	53	1,650	12,618
BSAI Shortraker Rockfish	0	11	6	4	3	3	3	7	3	0	17	2	0	60
Rougheye Rockfish	0	6	52	1	0	12	1	34	1	0	131	2	0	239
Northern Rockfish	0	3	471	1	0	1	1	46	21	0	171	0	0	714
Other Rockfish	0	14	164	20	13	11	9	56	4	0	140	27	0	458
Octopus	0	1	1	2	0	0	1	193	1	0	2	4	1	207
Sculpin	3	20	61	35	4	6	1	471	17	58	37	0	289	1,003
Shark	0	2	5	2	1	10	0	22	142	0	5	1	3	193
Total target fishery catch (mt)	**161**	**677**	**2,117**	**2,327**	**165**	**545**	**147**	**14,566**	**4,067**	**4,101**	**2,145**	**232**	**12,757**	**44,008**

Source: AKFIN; source file MRA_Target(2-3-25)

Table 5-21 Average discarded GOA catch (mt) by target fisheries and groundfish species, 2020 through 2024

	Target							
Species	Arrowtooth Flounder	Flathead Sole	Pacific Cod	Pollock	Rex Sole - GOA	Sablefish	Rockfish	Total species catch (mt)
Arrowtooth Flounder	246	1	105	168	39	353	216	1,264
Flathead Sole	36	0	15	6	1	4	22	92
Pacific Cod	285	1	82	94	3	10	184	850
Pollock	144	11	123	578	1	26	347	1,276
GOA Rex Sole	11	0	4	4	7	4	14	48
Sablefish	251	0	52	170	13	282	83	889
Pacific Ocean Perch	312	0	1	311	36	2	221	908
Northern Rockfish	20	0	2	0	0	0	16	39
GOA Dusky Rockfish	23	0	2	4	0	0	36	66
Atka Mackerel	3	0	1	0	0	0	56	60
GOA Skate	21	0	192	4	1	75	13	310
GOA Skate, Big	23	0	167	5	0	24	2	231
GOA Skate, Longnose	15	0	105	4	0	104	22	253
GOA Deep Water Flatfish	30	0	2	1	2	15	16	69
GOA Shallow Water Flatfish	17	0	40	333	2	5	15	520
GOA Demersal Shelf Rockfish	0	0	0	0	0	1	0	1
Rougheye Rockfish	4	0	1	3	0	35	11	55
Shortraker Rockfish	2	0	2	12	0	66	14	97
GOA Thornyhead Rockfish	1	0	3	0	1	11	8	24
Other Rockfish	10	0	29	7	0	14	234	295
Octopus	6	0	35	0	0	3	1	50
Sculpin	3	0	1	9	0	0	6	80
Shark	48	0	75	96	2	333	20	585
Total target fishery catch (mt)	**1,511**	**13**	**1,051**	**1,810**	**111**	**1,583**	**1,560**	**8,289**

Source: AKFIN; source file MRA_Target(2-3-25)

Looking at an example of the effects on how the proposed change from instantaneous MRA calculation under Alternative 1 to an offload-to-offload MRA calculation under Alternative 4 Option 2, the BSAI Greenland turbot species has an MRA of one percent in most directed fisheries but 7 percent for arrowtooth flounder and Kamchatka flounder and 35 percent for several rockfish fisheries, flathead sole, and sablefish fisheries. As noted in Table 5-19, the average amount of incidental caught BSAI Greenland turbot that was discarded in the target fisheries was 58 mt. The largest amount of BSAI Greenland turbot discarded was in the Pacific cod target fishery, which was 15 mt. Other amounts of discards occurred in Kamchatka flounder at 13 mt, sablefish at 8 mt, rockfish at 6 mt, and many other target fisheries at one and two mt. Given the average exvessel price of BSAI Greenland turbot at $1,017 per mt for all sectors combined from 2020 through 2023, it is likely that a portion of these discards in the different target fisheries were regulatory discards due to exceeding the instantaneous MRA limit for the closed to directed fishing species. Under an offload-to-offload MRA calculation, some of the discarded 58 mt of Greenland turbot would likely have been retained despite not having sufficient basis species on board the vessel early in the trip. As the vessel continues its trip, it is likely that the vessel in this example would have increased its basis species sufficiently enough to account for the incidental caught Greenland turbot early in the trip to meet the offload-to-offload MRA calculation. This change in MRA regulations for economically valuable incidental caught species like Greenland turbot is likely to increase the economic

revenue for those vessels that catch this valuable incidental species while at the same time lower regulatory discards of Greenland turbot.

Option 2 could also provide an economic incentive to harvest otherwise unavailable high valued species, up to their MRA amounts (i.e., covert targeting of species "closed" to directed fishing) by providing greater operational flexibility during a fishing trip. In general, the development of a "top off" fishery is dependent on a number of issues, including, but not limited to, the prices of the species, whether there is a potential buyer, accessibility of the species, storage availability, the ability to process the species, and the calculation of the MRA management period. In addition, the potential for a vessel to "top off" on a specific species varies across vessels. A vessel with the ability to limit incidental catch or the ability to discard low valued fish provides more discretion for "topping off" on incidental catch species. For vessels that participate in rationalization programs, these vessels can be limited to a degree in their ability to "top off" on many of the directed fisheries due to sideboard limits.

For most groundfish species, the additional flexibility to "top off" early in a fishing trip is not expected to affect most groundfish stocks relative to the status quo since the alternatives would not change the species TACs or the gear type and general location of the fisheries in which groundfish are caught. For some groundfish species though, the greater flexibility to "top off" for a species in combination with other factors like low OFL, ABC, and TAC relative to high total catch, high retention rates for the species, and the high exvessel price for these species could increase risk of exceeding the ABC and TAC, and in some rare cases approach the OFL. Taking into consideration all these factors, the groundfish species most at risk of exceeding the ABC and TAC and potentially OFL include BSAI Greenland turbot, GOA big skates, GOA longnose skates, and GOA other skates. Table 5-22 provides an overview of each of the species at-risk of exceeding the ABC and TAC and potentially OFL under Option 2.

Table 5-22 Groundfish species at risk of exceeding ABC and TAC and potentially OFL under Option 2

Area	Species	TAC/ABC/OFL	Comments	MRAs	OFL/ABC risk
BSAI	Greenland turbot	BSAI wide OFL. TACs are further divided by subareas. TACs often set at ABC.	High value fish so topping off does occur. Usually small ABC/OFL buffer resulting in about 500 mt. Note that in 2025 the buffer was set much higher. Harvest has been low in recent years due to HAL vessels being unable to participate due to whales and informal industry agreement. This could change once longline pots are authorized.	1%, 7%, or 35% depending on directed fishery	Medium - largely depends on ABC/OFL buffer. NMFS could potentially set the TAC lower if the risk increases.
GOA	Big skates	GOA wide OFL. TACs are further divided by subareas. Council usually sets TAC at ABC.	Topping off often in HAL fisheries occurs due to high value of species. In addition, low observer coverage sometimes results in high discard rates which, combined with more topping off behavior could result in ABC and OFL overages. Note that currently 2025 is having this issue. OFL/ABC buffer usually results in about 1,000 mt buffer.	5%	Medium high - skates also resilient so PSC is effective in controlling harvest with limited impact to stock.
GOA	Longnose skates	GOA wide OFL. TACs are further divided by subareas. Council usually sets TAC at ABC.	Topping off often in HAL fisheries occurs due to high value of species. In addition, low observer coverage sometimes results in high discard rates which, combined with more topping off behavior could result in ABC and OFL overages. In 2023 there was a longnose skate TAC overage in the EGOA. OFL/ABC buffer usually results in about 1,000 mt buffer.	5%	Medium high
GOA	Other skates	GOA wide. Council usually sets TAC at ABC.	Historically low ABC/OFL. Some skate species may have economic value resulting in top-off behavior. OFL/ABC buffer usually about 250 mt	5%	Medium - Not all skates in the "other skates" complex are high value species so not that much topping off is occurring currently. There was a TAC overage in 2022.

For C/Ps and motherships, applying all MRAs from offload to offload instead of instantaneously would be the simplest way to calculate MRAs. In this case, the vessel would no longer have to calculate instantaneous MRAs for the multiple concurrent regulatory fishing trips in which they may be engaged and would no longer have to ensure they did not exceed an MRA at any given moment of that fishing trip. Under instantaneous calculation, the risk of exceeding an MRA increases discards at the beginning of a trip. Most C/Ps and motherships maintain daily fishing logbooks, have observers on board (with a few exceptions for C/Ps who have low harvest), weigh catch on board, and complete daily production reports. However, in order to ensure a vessel is within the MRA amount at any given time, retained and discarded catch would need to be calculated at each point in time of the fishing trip. This can be a complicated and

long process, especially if the vessel was engaged in multiple concurrent fishing trips. It would likely be easier to calculate MRAs if they applied only at the fishing trip level instead of at any point in time, or if they were always calculated offload to offload. If, for example, a hook-and-line C/P remains at sea for three weeks fishing open access Pacific cod, the vessel would no longer have to track MRAs instantaneously saving on costs associated with discarding MRA overages throughout the three-week period which would likely improve revenues for the vessel and reduced waste of valuable groundfish species. Exceeding an MRA on an offload basis could result in enforcement action against the vessel operator.

For CVs there is not a mechanism to ensure that a CV is not over the MRA while in the middle of a fishing trip without an at-sea enforcement presence. Total retained catch is not sorted and weighed onboard CVs. Therefore, it is difficult to determine and enforce if a CV is within the allowed MRA at any given moment of the fishing trip. Fish storage is in refrigerated seawater tanks and inaccessible to at-sea enforcement. Altering current regulations to allow for all MRAs on CVs to apply from offload to offload would likely be easier to enforce. In addition, it may be less confusing for a non-AFA CV operator to treat all MRA species the same instead of having some calculated from offload to offload (i.e., BSAI pollock and BS Atka mackerel) and others calculated instantaneously (i.e., Pacific cod, Greenland turbot, octopus, etc.).

5.5 Alternative 5 – Provide Exemptions from MRA Requirements

This alternative would provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip. There have been instances where a vessel has come to port due to unforeseen circumstances such as an onboard medical emergency or mechanical issue. Because the vessel had to end their fishing trip earlier than expected, the vessel may end up over the MRA for one or more species if they have not accumulated enough basis species. Current regulation states that MRAs apply at any time and to all areas for the duration of the fishing trip, with the exception of BSAI pollock and BS Atka mackerel for non-AFA vessels. If a vessel is over the MRA at the end of a fishing trip it is a violation, even if the vessel had to come to port due to a medical emergency or mechanical issue. The MRA should be applied at any time for the duration of the fishing trip, which means there is no point in time where it would be allowable for the vessel to be over the MRA. As discussed in Section 5.3, many different triggers end a fishing trip on a C/P and mothership, including the end of a weekly reporting period and an offload. As a result, even if the vessel does not offload while in port, the weekly reporting period may end thus end the trip and putting them in violation.

BSAI pollock and BS Atka mackerel MRAs for non-AFA vessels are calculated offload to offload. If a vessel comes to port for a medical emergency or mechanical issue and does not offload, then the vessel cannot be in violation of exceeding the MRA for those species. However, often when a vessel is in town unexpectedly, it may be to their advantage to offload some, or all, of the product onboard so they will have more room in their freezers when they return to the fishing grounds and can remain on the grounds longer, thus conserving fuel expenses. If the vessel was unable to fish for basis species as long as they had originally anticipated, it is possible that they will be over their MRA for BSAI pollock and BS Atka mackerel if they offload. This would be considered a violation under current regulation.

This proposed alternative seeks to codify medical/mechanical exemptions and poor weather exemptions for MRA overages made on offload. OLE documents occurrences of medical and mechanical emergencies, which provide a metric to measure how often these situations occur under status quo. Though documented, the dual occurrence of an emergency and an MRA overage is rare. Between 2021 and 2024 OLE documented four instances in which a medical or mechanical issue forced an unexpected return to port and contributed to an MRA overage. Three of the four reported emergencies were verified. One related overage was resolved when the vessel completed repairs and returned to sea to resume fishing within the same weekly reporting period. In each of these cases, OLE received documentation from the

involved vessels confirming the emergency, including a written statement from a medical provider and written statements from the vessels' parent companies. No Report of Marine Casualty, USCG Form CG-2692, was submitted for the referenced incidents, but the form could be utilized as a standard means of confirming an emergency occurred for any adopted exemption. OLE consulted with the United States Coast Guard to determine if there is a vetting process to verify marine casualties, and OLE's potential to access those records. The USCG does take steps to verify each report, but in many circumstances that verification does not occur on site. Based on the low rate of occurrence and the near automated process of detecting and documenting MRA overages, OLE recommends continuing to assess overages on a case-by-case basis.

An exemption made due to weather would be far more subjective and therefore difficult to enforce. These options will be examined more closely at a future Enforcement Committee meeting, and included in the final action document.

5.6 Social Impacts of the Alternatives

NOAA Fisheries Guidance on conducting social impact assessments (SIAs) (NMFS 2007b) states that "In the context of marine fisheries conservation and management, SIAs focus on the human environment of the fisheries. That is, SIAs consider the effects of changes in resource availability or fishing practices on fishermen, communities, fishing-related businesses and employment, families and other social institutions, regulations and social norms of behavior, and cultural values."

The guidance further states that "While SIAs focus on social and cultural values and systems, economic impact assessments focus on market and non-market values and systems. Similarly, biological impact assessments focus on ecosystem changes and values. These three assessments combine to describe the human environment of participants in a fishery."

In addition to this general guidance, NOAA Fisheries has also prepared a Practitioners Guide to Conducting Social Impact Assessments (Clay and Colburn, 2020). This guide identifies the following categories of regulatory actions to consider for Social Impact Assessments:

- Allocations
- Closed areas/seasons
- Gear restrictions
- Fish size limits
- Trip, time period, and possession limits
- Days-at-sea
- Overall Catch limits
- Limited Access and Limited Entry
- Catch shares

Further, the guidance instructs analysts to consider potential social impacts on the following:

- Fisheries/Fleets
- Fishermen
- Fishing Communities

This analysis consists of a RIR that provides the economic impact analysis required by the guidance. That section of the document details the potential effects of the alternatives on fleet behavior that would be expected to result from the alternatives, noting that the analysis does require some informed speculation and scenario based analysis. That analysis makes it clear that the action alternatives do not directly regulate or create impacts, economic or social, on most of the impact categories or sectors of the fishing fleet, fishermen or communities with the exception that there may be effects on trips, time period, and

days at sea. However, these effects are largely due to a reduction in regulatory discards early in trips (Alternative 3. 4) that may change fleet behavior and are thought to be generally beneficial. Additionally, allowing the truncation of a trip for weather, mechanical, or medical reasons (Alternative 5) is considered generally beneficial. This section of the analysis documents that analysts did consider the potential for social impacts and the guidance for conducting an SIA. Given the very limited potential for social impacts, and that effects are generally beneficial this summary serves as the SIA analysis.

There are two exceptions to note regarding beneficial effects. Scenario analysis under Alternative 3, above has identified a possibility for localized depletion in critical habitat if early retention of incidental catch results in vessels staying in an area for a longer period of time. In addition, Alternative 4, option 2, as analyzed above does create the potential for harvests to come very close to, or possibly exceed individual species OFLs. Table 5-22 examines that potential and assesses the risk levels that may occur under this alternative and option. Should these situations arise, NOAA Fisheries Alaska Region Monitoring and In-Season Branch analysts would apply the various tools at their disposal, such as monitoring via the e-landings catch accounting system and issuing in-season directed fishery closures and PSC status. These actions would be applied to prevent overfishing to the extent practicable and the possible need for such actions is documented as Reasonable and Foreseeable Future Actions for Target Species and Incidentally caught species in the Environmental Assessment below.

5.7 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 IRFA 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

In the GOA area, the entities directly regulated by this action are: 1) entities operating vessels with groundfish Federal fishing permits (FFPs) harvesting GOA FMP groundfish in Federal waters; 2) all entities operating vessels, regardless of whether they hold groundfish FFPs, harvesting GOA FMP groundfish in the State waters parallel fisheries; and 3) all entities operating vessels fishing for halibut that have incidental catch of GOA FMP groundfish (whether or not they have FFPs).

In the BSAI area, the entities directly regulated by the groundfish harvest specifications include: a) entities operating vessels with groundfish FFFPs catching FMP groundfish in Federal waters (including those receiving direction allocations of groundfish); b) all entities operating vessels, regardless of whether they hold groundfish FFPs, catching FMP groundfish in the State-waters parallel fisheries; and c) all entities operating vessels fishing for halibut inside 3 nautical miles of the shore (whether or not they have FFPs).

Count of Small, Directly Regulated Entities

Using the most recent data available for the GOA area (2023), the estimated number of directly regulated small entities includes approximately 682 individual CV and C/P entities with gross revenues less than or equal to $11 million. This includes an estimated 680 small CV entities and 3 small C/P 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 682 CVs and C/Ps may be an overstatement of the number of small entities because of the complexity of analyzing the linkages and affiliations across these vessels, particularly since many of them conduct operations in Federal and State fisheries. The CVs had average gross revenues that varied by gear type. Average gross revenues for hook-and-line CVs, pot gear CVs, and trawl gear CVs are estimated to be $910,000, $1,530,000, and $2,280,000, respectively. Average gross revenues for hook-and-line C/Ps and pot gear C/Ps are confidential. There are no data for trawl gear C/P entity revenue.

Using the most recent data available for the BSAI area (2023) there were 119 individual CVs and C/Ps as well as 6 CDQ groups. This represents the potential suite of directly regulated small entities. This includes an estimated 116 small CV and 3 small C/P entities in the BSAI 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 119 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 hook-and-line CVs, pot gear CVs, and trawl gear CVs are estimated to be $910,000, $1.5 million, and $23 million, respectively.

Impacts to Small, Directly Regulated Entities

This section will be completed for the final action draft.

5.8 Alternatives with Respect to Net Benefit to the Nation

The measures under consideration would revise maximum retainable amount (MRA) regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) applications of MRAs. Other measures under consideration include (1) revising the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships, (2) add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors, and (3) provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip.

These actions ease regulatory burden, provide more operational flexibility for the fleet, and may reduce regulatory discards. These actions are not considered to create a significant adverse impact on a substantial number of directly regulated small entities.

6 Environmental Impacts

This chapter evaluates the potentially affected environment and the degree of the impacts of the alternatives and options on the various resource components, together with relevant past, present, and reasonably foreseeable actions.

Recent and relevant information, necessary to understand the affected environment for each resource component, is summarized in the relevant section below. For each resource component, the analysis identifies the potential impacts of each alternative and evaluates these impacts. If significant impacts are likely to occur, preparation of an Environmental Impact Statement (EIS) is required. Although an environmental analysis should evaluate economic and socioeconomic impacts that are interrelated with natural and physical environmental effects, economic and social impacts by themselves are not sufficient to require the preparation of an EIS.[22]

6.1 Methods for Environmental Impact Analysis

6.1.1 Resource Components Addressed in the Analysis

This section discusses the components of the human environment and whether the proposed action and its alternatives have the potential to impact that resource component and thus require further analysis. Extensive environmental analysis on all resource components is not needed in this document because the proposed action is not anticipated to have environmental impacts on all resource components. The effects of the alternatives on the resource components would be caused by any changes in fleet behavior that result from the alternatives. The alternatives do not change the MRA rates or the overall MRA management system. The alternatives clarify MRA accounting responsibilities, potentially revise trip definitions, and clarify regulatory precedence. Similarly, none of the alternatives address any allocation within the fishery, nor do they have direct effect on the target species stocks, as none of the alternatives would change any biological parameter used to manage the fishery. Thus, no effects are expected on habitat, seabirds, or the overall ecosystem. As a result, further analysis in this chapter is included only for the following resource components: target species, incidental catch species, and Steller sea lions and their critical habitat. Economic and social effects are addressed in the RIR.

6.1.2 Potential for Adverse Environmental Impacts

Any effects of the action alternatives on the resource components are likely to be caused by changes in the incidence and timing of regulatory discards and any effect such changes may have on fishing effort, location and trip length. In general, the action alternatives either clarify existing regulations or allow industry to manage their fishing trips so as to retain MRA species that would otherwise be discarded early in a trip, when an inadequate quantity of a basis species has been harvested. At present (status quo) it is possible for regulatory discards to occur early in the trip and then topping off of an MRA species can occur after sufficient basis species has been harvested to allow retention under the instantaneously enforceable MRA. This results in waste of the discarded incidental species and to the extent that the action alternatives alleviate this wastage they are generally beneficial to the environment.

[22] *See Cure Land, LLC v. USDA,* 833 F.3d 1223, 1235 (10th Cir.)(citing 40 CFR 1508.14); *Image of Greater San Antonio, Tex., v. Brown*, 570 F.2d 517, 522 (5th Cir. 1978).

Alternatives 1 and 2

Alternative 1, the status quo, would maintain current MRA management including instantaneous enforcement of MRAs while vessels are fishing. Alternative 2 would maintain the MRA management program in regulation and would not change MRAs or affect other fishery management measures. As such, Alternative 2 is a regulatory amendment that would ease reporting requirements and potentially increase efficiency in reporting and management of the fishery. Alternative 2 is not expected to create any adverse environmental effects.

Alternatives 3 and 4

Alternative 3 would revise the triggers that end a fishing trip from five to two triggers in the definition of a fishing trip for catcher/processors and motherships (not including current offload-to-offload species - BSAI pollock, Bering Sea (BS) Atka mackerel, and weekly reporting period species in the Central GOA Rockfish Program). These changes are analyzed in a series of possible scenarios of fleet behavior (Section 5.3) that estimate reductions in regulatory discards that are considered beneficial. However, while the level of regulatory discards could be decreased, there is the potential for increased harvest of incidentally caught species in Steller sea lion protection areas if vessels change their behavior. While the overall decrease in regulatory discards can be viewed as environmentally beneficially, the risk of increased incidental catch in protected areas could have potentially negative effects for Steller sea lions. It is hard to predict how a vessel will change behavior. If the trigger for calculation of an MRA in relation to protection areas is removed, it could create an incentive for vessels to change the location of the fishery and harvest more in protection areas without additional tools to limit change in behavior.

Alternative 4 would add specific target species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors. The alternative would continue to exclude AFA vessels for BSAI pollock and BS Atka mackerel from the offload calculation. The expected effects of these changes are detailed in section 5.4. That analysis has identified that there may be an enhanced risk of approaching ABC and OFL for some species. Table 5-22 identifies the species that may be at risk. It is hard to predict how vessel operators may change behavior with offload to offload. It may provide more clarity to a vessel operator on what they are allowed to retain and allow them to maximize harvest of valuable species. However under offload to offload calculation, they can retain amounts encountered earlier in a trip rather that discard it as they have to under status quo. This should allow more retention overall without increasing overall harvest, in fact it may decrease harvest when compared to the maximum obtained under status quo. Any target or incidentally caught species that approaches fishery limits will be actively managed by in-season management staff to prevent overfishing. Thus, though these risks are identified in the analysis they are expected to be mitigated by existing fishery management mechanisms and are not considered to be environmentally significant. In addition, and similar to effects of alternative 3, depending on vessel behavior, incidental catch could potentially increase in protection areas. If a vessel waited until the end of a trip under alternative 4 to top off on incidental catch species and chose to do so in a protection area, the amount of basis species onboard would likely be greater for that trip than under status quo and the overall amount of incidental catch in the protection area would be greater than under status quo. One example of a method that could mitigate this could be requiring that MRAs be calculated offload-to-offload for each area they fished with different MRAs. For example, if a vessel fished in both an SSL area and a non-SSL area while at sea, at the time of offload the vessel would calculate their MRAs from harvest within the SSL area separately from MRAs outside an SSL area. This would prevent topping off activity inside an SSL area from including basis species harvested outside the SSL area, thus lowering the amount of harvest taken in sensitive areas.

Alternative 5

Alternative 5 would provide exemptions from MRA regulations in cases of medical emergency, mechanical breakdowns, or adverse weather. These exemptions would enhance vessel safety and are expected to have positive effects for fishermen and their families and would not measurably affect harvest, revenue, or other environmental factors. While terminating a trip may result in added sea time on later trips and may possibly affect overall cost of production, these effects are not considered to be environmentally significant.

6.1.3 Effects of Aggregate Past, Present, and Reasonably Foreseeable Actions

This analysis of environmental impacts analyzes the effects of each alternative and the effects of past, present, and reasonably foreseeable actions (RFA). As stated above, the resources with potentially meaningful effects are Steller sea lions and their critical habitat, incidentally caught species, targeted species, and economic and social effects as discussed in the RIR (Chapter 5). The aggregate effects on the other resources have been analyzed in numerous documents and the impacts of this proposed action and alternatives on those resources are negligible, therefore there is no need to conduct additional analysis.

Each section below provides a review of the relevant past, present, and RFA that may result in aggregate effects on the resource components analyzed in this document. A complete review of the past, present, and RFAs of the operation of Alaska groundfish fisheries are described in the prior NEPA documents incorporated by reference (Section 1.5) and the supplemental information report (SIR) NMFS prepares to annually review the latest information since the completion of the Alaska Groundfish Harvest Specifications EIS. SIRs have been developed since 2007 and are available on the NMFS Alaska Region website. Each SIR describes changes to the groundfish fisheries and harvest specifications process, new information about environmental components that may be impacted by the groundfish fisheries, and new circumstances, including present and reasonably foreseeable future actions. NMFS reviews the reasonably foreseeable future actions described in the Harvest Specifications EIS each year to determine whether they occurred and, if they did occur, whether they would change the analysis in the Harvest Specifications EIS of the impacts of the harvest strategy on the human environment. In addition, NMFS considered whether there are substantial new circumstances or information that have occurred since the Harvest Specifications EIS that have a bearing on the harvest strategy or its impacts and cause significantly different effects from those already analyzed. The SIRs provide the latest review of new information regarding Alaska groundfish fisheries management and the marine environment since the development of the Harvest Specifications EIS and provide aggregate information applicable to the alternatives analyzed in this analysis of environmental impacts.

Actions are understood to be human actions (e.g., a designation of northern right whale critical habitat in the Pacific Ocean), as distinguished from natural events (e.g., an ecological regime shift). NEPA requires consideration of actions, whether taken by a government or by private persons, which are reasonably foreseeable. This requirement is interpreted to indicate actions that are more than merely possible or speculative. Actions are considered reasonably foreseeable if some concrete step has been taken toward implementation, such as a Council recommendation or NMFS's publication of a proposed rule. Actions only "under consideration" have not generally been included, because they may change substantially or may not be adopted, and so cannot be reasonably described, predicted, or foreseen. Identification of actions likely to impact a resource component within this action's area and time frame will allow the public and Council to make a reasoned choice among alternatives.

6.2 Target Species

The target species potentially affected by this action are the various groundfish species in the BSAI and GOA groundfish fisheries. Section 3.3 provides a discussion of these species and Tables 3-1 and 3-2 provide recent harvest specifications data for these species.

6.2.1 Effects of the alternatives on target species

The effects of the BSAI and GOA groundfish fishery on the various groundfish stocks are assessed annually in the GOA SAFE report (NMFS 2024a) and were also evaluated in the Alaska Groundfish Fisheries Harvest Specifications EIS (NMFS 2007a). Stock status is also assessed annually to determine whether overfishing is occurring or if the stocks are in an overfished status in the Ecosystem Status Reports for the eastern Bering Sea, the Aleutian Islands and the Gulf of Alaska.[23] This information is also available online on the NOAA Fisheries stock status webpage that is updated quarterly.[24] As of December 31, 2024, none of the BSAI or GOA groundfish stocks are neither overfished nor subject to overfishing.

The effects of the alternatives on BSAI and GOA groundfish stocks are either neutral or potentially beneficial. The alternatives do not directly affect stock status or the annual TAC setting process. Similarly, the alternatives do not change the MRA percentages for any incidentally caught species or the MRA management process.

Overall the BSAI and GOA groundfish stock would not be overfished or experience overfishing because the current harvest specifications process for setting TACs and managing harvests within the limits would continue. Any potential impacts on prey availability and habitat are not likely to affect the sustainability of the stock.

6.2.2 Effects of Aggregate Past, Present, and Reasonably Foreseeable Actions on Target Species

The following RFAs are identified as likely to have an impact on BSAI and GOA groundfish stocks within the action area (shown in Figure 1-1) and timeframe. Annually, each BSAI and GOA groundfish stock will be scientifically assessed and the stock assessment authors will prepare a chapter of the annual SAFE report that is then reviewed by the Council's Scientific and Statistical Committee (SSC). The SSC then recommends TAC specifications to the Council and the Council will adopt a set of specifications for the next two years of BSAI and GOA groundfish fishing. NMFS will then prepare a proposed and final temporary rule to implement the annual TAC specifications. Within the proposed and final rules, respectively, an Initial and eventually final regulatory flexibility Analysis, as required by Regulatory Flexibility Act.

In addition, the Council is considering several changes to BSAI and GOA groundfish management in the future. These include subarea apportionments, accountability measures, pelagic trawl gear innovations, and a BSAI Pacific cod pot gear limited access program. These foreseeable actions are all subject to the full Council process including a NEPA analysis, RIR, and Regulatory Flexibility Act Analysis (RFAA) (Initial Regulatory Flexibility Analysis/Final Regulatory Flexibility Analysis). The Council is also considering ways to enhance the TAC setting process by using social and economic data, as well as considering changes to scientifically based harvest control rules in the TAC setting process.

Considering the direct and indirect impacts of the proposed action when added to the impacts of past and present actions previously analyzed in other documents that are incorporated by reference and the impacts

[23] ESRs available at https://www.fisheries.noaa.gov/alaska/ecosystems/ecosystem-status-reports-gulf-alaska-bering-sea-and-aleutian-islands
[24] Available at https://www.fisheries.noaa.gov/national/population-assessments/fishery-stock-status-updates

of the reasonably foreseeable future actions listed above, the aggregate impacts of the proposed action are determined to be not significant.

6.3 Non-target species

Non target species are those BSAI and GOA groundfish species that are incidentally caught during directed fishing. Many of these non-target groundfish species are managed under an MRA and can also be targeted with directed fishing at various times and in various areas during the fishing seasons. Section 3.3 provides a discussion of these species and Tables 3-1 and 3-2 provide recent harvest specifications data for these species. Additionally, Tables 3-4 and 3-5 provide both target and non-target harvest information with shaded cells representing incidentally caught species identified in shaded cells by target fishery and target removals identified in the species to target matching cells that are not shaded.

6.3.1 Effects of the alternatives on non-target species

The effects of the alternatives on non-target groundfish species in the BSAI and GOA groundfish fisheries is either neutral or positive depending on alternatives and options. To the extent that the alternatives reduce regulatory discards caused by instantaneous MRA enforcement the incidentally caught species stock would benefit due to improved retention and less wastage of the stock. In general though, the potential changes in the stock of incidentally caught groundfish, as a result of the alternatives are not expected to significantly impact non-target stocks because existing spatial, seasonal, and harvest limit protections would continue.

6.3.2 Effects of Aggregate Past, Present, and Reasonably Foreseeable Actions on Non-Target Species

The following RFAs are identified as likely to have an impact on BSAI and GOA Groundfish stocks within the action area and timeframe. Incidental groundfish species may also be targeted species and can also be put into protected species status if the TAC has been fully harvested. Thus, these species are assessed in the annual SAFE report and are subject to the same process for annual stock assessment, rulemaking, and regulatory flexibility analysis as described for target groundfish species.

Considering the direct and indirect impacts of the proposed action when added to the impacts of past and present actions previously analyzed in other documents that are incorporated by reference and the impacts of the reasonably foreseeable future actions listed above, the aggregate impacts of the proposed action are determined to be not significant.

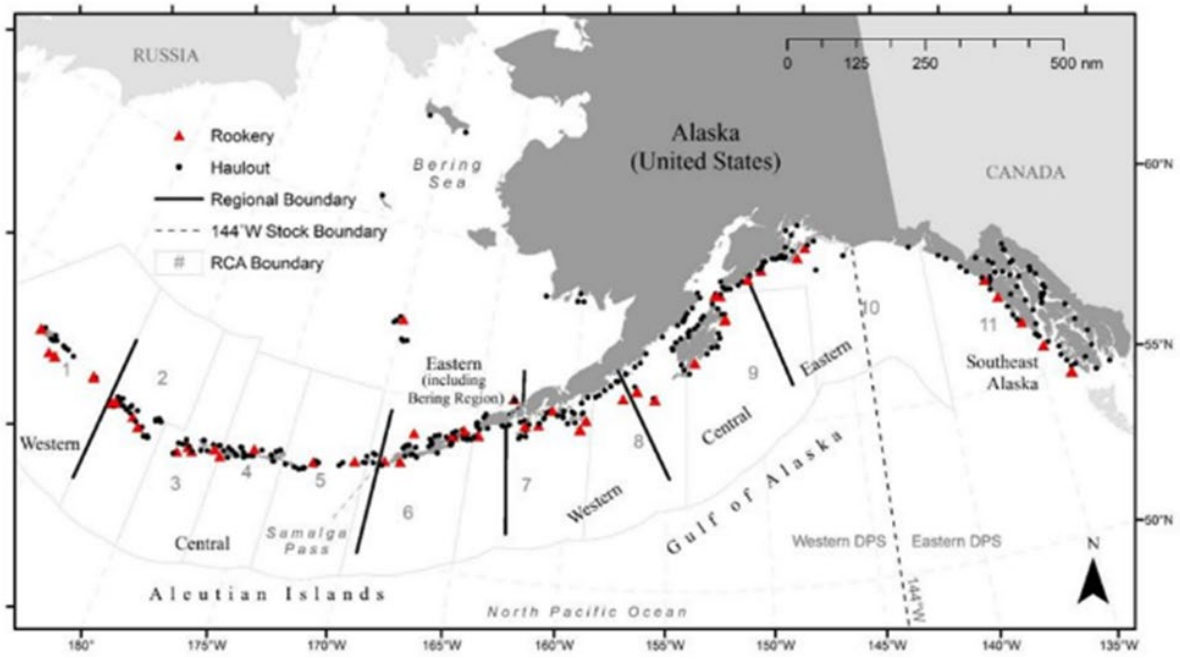
6.4 Steller Sea Lions

As this action could primarily affect the spatial harvest of specific groundfish species, not the overall amount of harvest of groundfish that are preferred prey for marine mammals, this section will only focus on those marine mammals that rely on localized prey specific to where the action overlaps. In this case, the only marine mammals that meet those criteria are Steller sea lions.

The Steller sea lion (*Eumetopias jubatus*) was listed as a threatened species under the ESA on November 26, 1990 (55 FR 49204). On May 5, 1997, NMFS reclassified Steller sea lions into two distinct population segments (DPSs) based on genetic studies and other information (62 FR 24345); at that time, the eastern DPS (eDPS) was listed as threatened and the western DPS was listed as endangered. On November 4, 2013, the eDPS was removed from the endangered species list (78 FR 66140). The western DPS (wDPS) of Steller sea lions includes animals born west of Cape Suckling, Alaska (144° W; 62 FR 24345, May 5, 1997). However, individuals move between rookeries and haul out sites regularly, even over long distances between eastern and western DPS locations (Jemison et al. 2013; Jemison et al. 2018;

Hastings et al. 2020) and individuals from the wDPS may be present as far south as Sumner Strait in southeast Alaska (Figure 6-1) (Hastings et al. 2020; NMFS 2020). Most adult Steller sea lions occupy rookeries during the summer pupping and breeding season and exhibit a high level of site fidelity (Raum-Suryan et al. 2002; Hastings et al. 2017). During the breeding season, some juveniles and non-breeding adults occur at or near the rookeries, but most are on haulouts (sites that provide regular retreat from the water on exposed rocky shoreline, gravel beaches, and wave-cut platforms or ice) (Rice 1998; Ban 2005; Call and Loughlin 2005). Steller sea lions disperse widely after the breeding season (late May to July), likely to access seasonally important prey resources. During fall and winter many sea lions disperse from rookeries and increase use of haulouts, particularly on terrestrial sites but also on sea ice in the Bering Sea (Calkins 1998; Sinclair et al. 2019).

Figure 6-1 Steller sea lion rookeries (red triangles), haulouts (black dots), the line at 144 West longitude that separates the eastern and western DPSs (dotted line), and the line at Sumner Strait marking the southern extent of the wDPS (blue line)

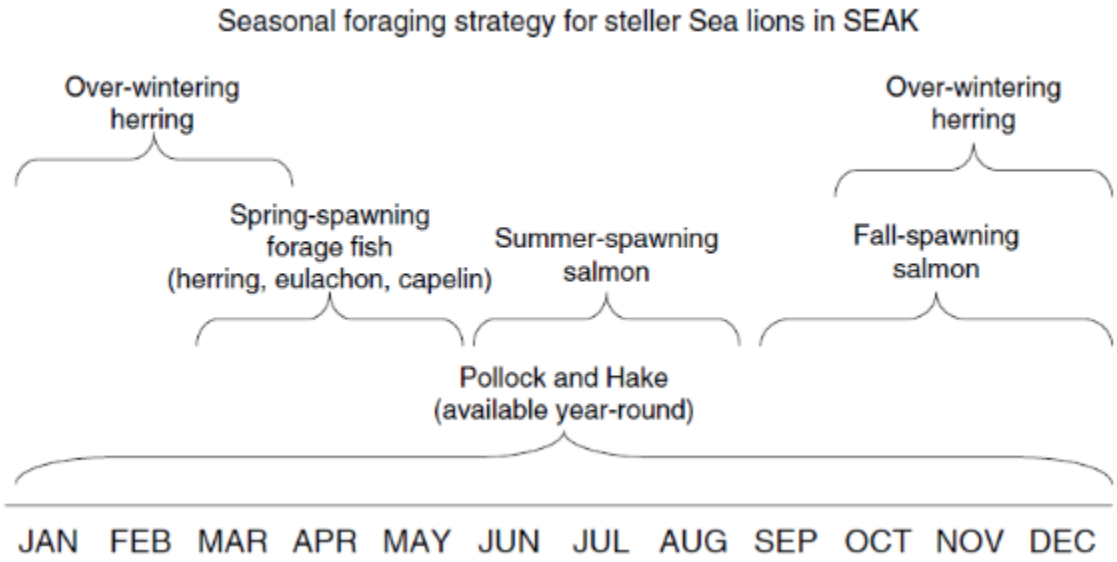


Source: Adaptation from Fritz et al. 2016

During summer, Steller sea lions feed mostly over the continental shelf and shelf edge. Females attending pups typically forage within 20 nm of breeding rookeries (Merrick and Loughlin 1997), which is the basis for designated critical habitat around rookeries and major haulout sites.The foraging strategy of Steller sea lions is strongly influenced by seasonality of sea lion reproductive activities on rookeries and the ephemeral nature of many prey species (Figure 6-2). Overall, available data suggest distribution at sea by Steller sea lion in two regions: 1) less than 20 km (12 mi) from rookeries and haulout sites for adult females with pups, pups, and juveniles, and 2) much larger areas (greater than 20 km [12 mi]) where they may range to find optimal foraging conditions once they are no longer tied to rookeries and haulout sites for nursing and reproduction. Merrick and Loughlin (1997) observed large seasonal differences in foraging ranges that may have been associated with seasonal movements of prey, and concluded on the basis of available telemetry data that seasonal changes in home ranges were related to prey availability. Steller sea lions consume a variety of demersal, semi-demersal, and pelagic prey, indicating a potentially broad spectrum of foraging styles, probably based primarily on availability. Primary prey items include

eulachon, herring, salmon, Pacific cod, Atka mackerel, pollock, and squid. Diving is generally to depths of 600 feet or less, and diving duration is usually 2 minutes or less.

Figure 6-2 Seasonal foraging ecology of Steller Sea Lions.



Source: Reproduced with permission from Womble et al. 2009

The minimum population estimate for the U.S. portion of the range of western DPS Steller sea lions in 2022 was 49,837 (Young et al. 2024). Data from 1978-2022 indicate that the western DPS Steller sea lion population was at its lowest levels in 2002. Between 2007 to 2022, western DPS non-pup and pup counts increased 1.05% and 0.50% per year, respectively (Sweeney et al. 2023). However, there was high variability among regions. Steller sea lions in the western Aleutian Islands region continued to decline, along with pups in the adjacent central Aleutian Islands region. East of Samalga Pass, Aleutian Islands, pup production slowed or plateaued in the early 2010s, with subsequent non-pup plateauing or declines starting in the late 2010s in all regions (Sweeney et al. 2023).

Threats to the western DPS Steller sea lion include fishery interactions such as entanglement and hooking, changes in prey distribution due to climate change, competition with fisheries for prey, and biotoxins (NMFS 2020b).

Additional information on Steller sea lion biology, status, and threats is available at:

- NOAA Fisheries Species Directory, Steller Sea Lion Species Description.
- NOAA Fisheries Marine Mammal Stock Assessment Reports: Pinnipeds-Otariids.
- NMFS Protected Resources Division, 5-Year Review for Western Distinct Population Segment SSL, 2020.

6.4.1 Steller Sea Lion Critical Habitat

NMFS designated critical habitat for Steller sea lions on August 27, 1993 (58 FR 45269)[25]. In Alaska, designated critical habitat includes the following areas as described at 50 CFR § 226.202:

- Terrestrial zones that extend 3,000 feet (0.9 km) landward from each major haulout and major rookery in Alaska.

[25] Available at https://www.fisheries.noaa.gov/action/designation-critical-habitat-steller-sea-lions

- Air zones that extend 3,000 feet (0.9 km) above the terrestrial zone of each major haulout and major rookery in Alaska.
- Aquatic zones that extend 3,000 feet (0.9 km) seaward of each major haulout and major rookery in Alaska that is east of 144° W longitude.
- Aquatic zones that extend 20 nm (37 km) seaward of each major haulout and major rookery in Alaska that is west of 144° W longitude.
- Three special aquatic foraging areas: the Shelikof Strait area, the Bogoslof area, and the Seguam Pass area, as specified at 50 CFR § 226.202(c).

6.4.2 Steller Sea lion Protections Measures

To protect Steller sea lions from potential competition for prey, NMFS has closed areas around Steller sea lion rookeries and important haulouts to commercial fishing for prey species. In addition to conserving prey for Steller sea lions, the area closures reduce the potential for the fisheries to disrupt the sea lions' normal behavior near their terrestrial habitat. When the stock biomass of a Steller sea lion prey species is low, additional controls are applied to the annual catch limits to ensure that prey remain available for sea lions. NMFS has also imposed seasonal limits on catch of Steller sea lion prey and limits on catch of these species inside of Steller sea lion critical habitat.

Steller sea lion protection measures are integrated throughout the regulations for the Fisheries of the Exclusive Economic Zone off Alaska at 50 CFR Part 679.[26]

Buffer and Closed Areas

Regulations at 50 CFR 224.103(d)(1)(ii) state that no vessel of any type is allowed within 3 nm of Steller sea lion rookeries listed at 50 CFR 224.103(d)(1)(iii). The State of Alaska enforces similar regulations in state marine waters 0–3 nautical miles (nm) from shore.[27]

There are many regulations in place in order to minimize prey competition between Steller sea lions and groundfish fisheries.

Gulf of Alaska Regulations

Regulations at 50 CFR 679.22(b)(2)(i) close areas in the Gulf of Alaska to groundfish fishing within three nautical miles of selected sites in order to protect Steller sea lions and their prey. These areas are shown in Figure 3 and listed in Table 12 to 50 CFR Part 679 and include Ogchul Island, Akutan/Cape Morgan, Ugamak Island, Clubbing Rocks (South and North), Pinnacle Rock, Chernabura Island, Atkins Island, Chowiet Island, Chirikof Island, Sugarloaf Island, Marmot Island, Outer Pye Island, Wooded Island, and Seal Rocks.

Regulations at 50 CFR 679.22(b)(2)(ii) implement pollock no-fishing zones. Directed fishing for pollock by vessels with a Federal Fisheries Permit is prohibited within pollock no-fishing zones around selected sites shown in Figure 3 below and listed in Table 4 to 50 CFR Part 679.

Regulations at 50 CFR 679.22(b)(2)(iii) implement Pacific cod no-fishing zones. Directed fishing for Pacific cod by vessels named on a Federal Fisheries Permit and using trawl, hook-and-line, or pot gear in

[26] A full list of the Federal Register rules and notices for Steller sea lion protection measures are available at https://www.fisheries.noaa.gov/action/steller-sea-lion-protection-measures-federal-register-rules-and-notices. A timeline and history of SSL protection measures is available at https://www.fisheries.noaa.gov/alaska/commercial-fishing/steller-sea-lion-protection-measures.

[27] State of Alaska regulations at: 5 AAC 28.087. Management measures in parallel groundfish fisheries for protection of Steller sea lions, 5 AAC 28.640(i) Aleutian Islands District and Western District of the South Alaska Peninsula Area Sablefish Management Plan, 5 AAC 28.647(h) Aleutian Islands Subdistrict Pacific Cod Management Plan, and 5 AAC 28.648(l) Dutch Harbor Subdistrict Pacific Cod Management Plan.

the federally managed Pacific cod or State of Alaska parallel groundfish fisheries, as defined in Alaska Administrative Code (5 AAC 28.087(c)), is prohibited within Pacific cod no-fishing zones around selected sites. These sites and gear types are shown in Figure 4 and listed in Table 5 to 50 CFR Part 679.

Regulations at 50 CFR 679.22(b)(2)(iv) implement Atka mackerel no-fishing zones. Directed fishing for Atka mackerel by vessels named on a Federal Fisheries Permit within the Gulf of Alaska subarea is prohibited at all times as shown in Figure 5.

Bering Sea Regulations

Bogoslof Area: Regulations at 50 CFR 679.22(a)(7)(i) prohibit directed fishing for pollock, Pacific cod, and Atka mackerel in within the Bogoslof area by vessels named on a Federal Fisheries Permit under § 679.4(b), except as provided in paragraph 50 CFR 679.22(a)(7)(i)(C).

Bering Sea Pollock Restriction Area: Regulations at 50 CFR 679.22(a)(7)(ii) close all waters within the Bering Sea Pollock Restriction Area during the A season, as defined at § 679.23(e)(2), to directed fishing for pollock by vessels named on a Federal Fisheries Permit under § 679.4(b).

Closures:

- ***50 CFR 679.22(a)(7)(iii): Groundfish closures.*** Directed fishing for groundfish by vessels named on a Federal Fisheries Permit under § 679.4(b) is prohibited within 3 nm of selected sites. These sites are listed in Table 12 of this part and are identified by "Bering Sea" in column 2.
- ***50 CFR 679.22(a)(7)(iv): Pollock closures.*** Directed fishing for pollock by vessels named on a Federal Fisheries Permit under § 679.4(b) is prohibited within pollock no-fishing zones around selected sites. These sites are listed in Table 4 of this part and are identified by "Bering Sea" in column 2.
- ***50 CFR 679.22(a)(7)(v): Pacific cod closures.*** Directed fishing for Pacific cod by vessels named on a Federal Fisheries Permit under § 679.4(b) and using trawl, hook-and-line, or pot gear is prohibited within the Pacific cod no-fishing zones around selected sites. These sites and gear types are listed in Table 5 of this part and are identified by "BS" in column 2.
- ***50 CFR 679.22(a)(7)(vi): Atka mackerel closures.*** Directed fishing for Atka mackerel by vessels named on a Federal Fisheries Permit under § 679.4(b) and using trawl gear is prohibited within the Bering Sea reporting areas.

Steller sea lion conservation area: Directed fishing for pollock by vessels catching pollock for processing by the inshore component, catcher/processors in the offshore component, motherships in the offshore component, or directed fishing for CDQ pollock, is prohibited within the SCA until April 1 when the Regional Administrator announces, by notification in the Federal Register, that the criteria set out at 50 CFR 679.22(a)(7)(vii)(C) have been met by that industry component.

Aleutian Islands Regulations

Seguam Foraging area: Directed fishing for pollock, Pacific cod, and Atka mackerel by vessels named on a Federal Fisheries Permit under § 679.4(b) is prohibited in the Seguam Foraging area as described in paragraph 50 CFR 679.22(a)(8)(i)(A).

Closures:

- ***50 CFR 679.22(a)(8)(ii): Pollock Closure.*** Directed fishing for pollock by vessels named on a Federal Fisheries Permit under § 679.4(b) is prohibited within the pollock no-fishing zones around selected sites. These sites are listed in Table 4 of this part and are identified by "Aleutian I." in column 2.

- **50 CFR 679.22(a)(8)(iii): *Groundfish closures.*** Directed fishing for groundfish by vessels named on a Federal Fisheries Permit under § 679.4(b) is prohibited within 3 nm of selected sites. These sites are listed in Table 12 of this part and are identified by "Aleutian Islands" in column 2.
- **50 CFR 679.22(a)(8)(iv): *Pacific cod closures.*** Directed fishing for Pacific cod required to be deducted from the Federal TAC specified at § 679.20 by vessels named on a Federal Fisheries Permit under § 679.4(b) using trawl, hook-and-line, or pot gear is prohibited within Pacific cod no-fishing zones around selected sites. These sites and gear types are described in Table 5 of this part and its footnotes and are identified by "AI" in column 2.
- **50 CFR 679.22(a)(8)(v): *Atka mackerel closures.*** Directed fishing for Atka mackerel by vessels named on a Federal Fisheries Permit under § 679.4(b) and using trawl gear is prohibited within Atka mackerel no-fishing zones around selected sites. These sites are listed in Table 6 of this part and are identified by "Aleutian Islands" in column 2.

6.4.3 Effects of the Alternatives on Steller Sea Lions

Alternatives 1, 2 and 5 will have no meaningful effect on Steller sea lions as they contemplate administrative changes that do not impact timing, location or magnitude of groundfish harvest.

Alternatives 3 and 4 could affect the localized availability of prey in Steller sea lion protection areas. A similar proposed rule was withdrawn[28] in 2009, citing "Although the Council's action provided relief from the ''instantaneous'' accounting interval, the Council determined that a relaxed interval would increase incentives to harvest incidental catch in Steller sea lion protection areas. To address this problem, the Council decided that a new fishing trip would begin or end any time a non-AFA trawl C/P would enter or leave a Steller sea lion protection area that was closed to directed fishing for Atka mackerel or Pacific cod."

In the current action, a similar issue could arise where incidental catch of prey species important to Stellar sea lions (i.e. pollock, Pacific cod and Atka mackerel) could increase inside protection areas. Extensive regulations have been implemented over the years to prevent localized depletion of Steller sea lions, any action that increases the catch of these preferred prey species inside Steller sea lion protection areas does not meet the spirit or intent of these regulations. If the Council wished to proceed with either Alternative 3 or 4, it may wish to consider mechanisms that would de-incentivize "topping off" in protected areas.

6.4.4 Effects of Aggregate Past, Present, and Reasonably Foreseeable Actions on Steller sea lions

Steller sea lion abundance has increased overall since their listing in 1990, however in recent years, population growth has plateaued or begun to decrease in several regions. It is possible that environmental changes related to the unparalleled northeast Pacific marine heatwave in the Gulf of Alaska may be a major contributor. The northeast Pacific marine heatwave/The Blob persisted from 2014-2016, with some cooling in 2017, then continued with warming conditions through 2019 (Litzow et al. 2020, Suryan et al. 2021). This warming could have impacted pup production, juvenile and adult survival, and/or movement of Steller sea lions (Sweeney et al. 2022). Fisheries competition for prey and direct interactions (i.e. entanglement, ingestion of lures, capture) could play a role in the decline, but other threats, such as climate change and a multitude of anthropogenic effects (e.g. contaminants, illegal shooting, marine debris) are likely also at play. These effects are likely to continue into the reasonably foreseeable future.

[28]The 2009 withdrawal is available at https://www.federalregister.gov/documents/2009/12/10/E9-29475/fisheries-of-the-exclusive-economic-zone-off-alaska-maximum-retainable-amounts-for-non-american

6.5 NEPA Summary

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

This section will be completed for the final action draft.

7 Magnuson-Stevens Act and FMP Considerations

7.1 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 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.

7.2 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 EA/RIR prepared for this plan amendment constitutes the fishery impact statement. The likely effects of the proposed action are analyzed and described throughout the EA/RIR. The effects of the proposed action on safety of human life at sea are evaluated under National Standard 10. Based on the information reported in this section, there is no need to update the Fishery Impact Statement included in the FMP.

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

7.3 Council's Ecosystem Vision Statement

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

Ecosystem Approach for the North Pacific Fishery Management Council

Value Statement

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

Vision Statement

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

Implementation Strategy

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

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

In considering this action, the Council is being consistent with its ecosystem approach policy. The justification will be included in the final action version.

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Appendix 1 Timeline of MRA Actions

Below is a timeline of some pertinent actions regarding MRAs. However, many MRA changes occurred in conjunction with other regulatory packages and may not be listed here.

1995 - 60 FR 40304, 08/08/1995

- Established maximum retainable bycatch (MRB) percentages by FMP area and species.
- Directed fishing is defined as an amount exceeding the MRB percentages.
- MRB percentages applied at any time during the fishing trip (i.e. instantaneous).

1997 - 62 FR 11109, 03/11/1997

- Reduced MRB percentage of sablefish in GOA trawl gear to slow the harvest rate of sablefish.
- Allowed use of arrowtooth flounder as basis species when calculating MRB of pollock and Pacific cod in the GOA to provide fuller utilization of pollock and Pacific cod.

- 62 FR 35109, 06/30/1997 and correction 62 FR 38944, 07/21/1997

- Defined *fishing trip* with respect to monitoring compliance with groundfish directed fishing closures as ending when:
  - The effective date of a notification prohibiting directed fishing in the same area is issued;
  - The offload or transfer of all fish or fish product occurs from that vessel;
  - The vessel enters or leaves an area with a different directed fishing prohibition;
  - The end of a weekly reporting period is reached, whichever comes first.

1997 - 63 FR 15334, 03/31/1998

- Separated shortraker/rougheye rockfish from aggregated rockfish in the AI for purposes of the MRB percentages.
- Reduced MRB percentage for shortraker/rougheye in the AI to reduce the potential of overfishing.

1998 - Amendments 49: 62 FR 63880, 12/03/1997 (BSAI) and 62 FR 65379, 12/12/1997 (GOA)

- IR/IU regulations established in the BSAI and GOA for Pacific cod and pollock.
- IR/IU regulations established for yellowfin sole and rock sole to begin in 2003 in the BSAI.
- IR/IU regulations established for shallow water flatfish to begin in 2003 in the GOA.

2000 - 64 FR 68054, 12/06/1999

- Separated shortraker/rougheye rockfish form aggregated rockfish in the GOA for purposes of the MRB percentages.
- Reduced MRB percentage for shortraker/rougheye in the Eastern district of the GOA to reduce the potential of overfishing.

2003 - Amendment 75: 68 FR 52142, 09/02/2003

- Removes rocksole and yellowfin sole from IR/IU regulations in the BSAI.

2004 - 69 FR 32901, 06/14/2004

- BSAI pollock MRA changed from instantaneous calculation to time of offload for non-AFA vessels to allow for greater utilization of pollock and reduce discards.

- Clarified that the lowest MRA for any area where fish are harvested during a fishing trip applies for the duration of the fishing trip for CVs.
- MRB changed to MRA for consistency with the definition of bycatch in the Magnuson/Stevens Act.

2006 – Amendment 79: 71 FR 17362, 04/06/2006

- Implemented GRS for non-AFA C/Ps in the BSAI.
  - Vessels must retain FMP groundfish species up to a specified yearly standard.
- Required 15 percent utilization standard for all retained FMP groundfish species for non-AFA C/Ps.

2007 – Amendment 80: 72 FR 52668, 09/14/2007

- Established the Amendment 80 sector.
- Clarified GRS program requirements for Amendment 80 cooperatives

2008 - 73 FR 71592, 11/25/2008

- Increased MRAs when using arrowtooth flounder as a basis species in the GOA.

2009 - 74 FR 7209, 02/13/2009 (proposed rule), 74 FR 65503, 12/10/2009 (withdrawn)

- Proposed to establish MRAs at time of offload for non-AFA trawl C/Ps for yellowfin sole, rock sole, flathead sole, "other flatfish", arrowtooth flounder, Pacific cod, and Atka mackerel in the BSAI and Pacific Ocean perch in the AI.
- Proposed that the trip trigger and instantaneous MRAs remain in place when entering a Steller sea lion (SSL) protection area for Atka mackerel and Pacific cod.
- Proposed rule was withdrawn after industry stated it may not be effective at reducing bycatch because of additional costs for complying with the SSL trip trigger.

2011 - Amendment 88; 76 FR 81248, 12/27/2011

- Implemented the central GOA Rockfish Program.
- MRAs calculated at the end of the weekly reporting period for C/Ps in the central GOA fishing under a rockfish CQ permit.

2011 - 75 FR 78172, 12/15/2010 (emergency rule), 76 FR 31881, 06/02/2011 (emergency rule extension)

- Temporarily exempted Amendment 80 from the GRS program.

2013 - 78 FR 29248, 05/20/2013

- Increased MRAs when using arrowtooth or Kamchatka flounders as a basis species in the BSAI.

2013 - 78 FR 12627, 02/25/2013

- Removed the GRS program for Amendment 80.
- Required annual reporting of groundfish retention performance to NMFS by Amendment 80 cooperatives.

2014 - FR 79 70286, 11/25/2014

- Implemented Steller sea lion protection measures.
- BS Atka mackerel MRA changed from instantaneous calculation to time of offload for non-AFA vessels in order to reduce regulatory discards and allow more harvest in the BS.

2015 - 80 FR 80695, 12/28/2015

- Reduced MRA of skates in the GOA in order to slow the rate of harvest and reduce the incentive for topping off on skates.

2020 - 85 FR 9687, 02/20/2020

- Implemented full retention of rockfish species in the BSAI and GOA for CVs using pot, jig and hook-and-line gear. Effective date was March 23, 2020.

Appendix 2 Table 10, Table 11, and Table 30 to Part 679—GOA Groundfish MRAs, BSAI Groundfish MRAs, and Rockfish Program Retainable Percentages

Table 10 to Part 679—Gulf of Alaska Retainable Percentages

BASIS SPECIES			INCIDENTAL CATCH SPECIES (for DSR caught on catcher vessels in the SEO, see § 679.20 (j)[6])															
Code	Species	Pollock	Pacific cod	DW Flat (2)	Rex sole	Flathead sole	SW Flat (3)	Arrow-tooth	Sablefish	Aggregated rockfish[7]	SR/RE ERA (1)	DSR SEO (C/Ps only) (5)	Atka mackerel	Aggregated forage fish[9]	Skates (10)	Other species (6)	Grenadiers (12)	Squids	Sculpins
110	Pacific cod	20	n/a[9]	20	20	20	20	35	1	5	(1)	10	20	2	5	20	8	20	20
121	Arrowtooth	5	5	20	20	20	20	n/a	1	5	0	0	20	2	5	20	8	20	20
122	Flathead sole	20	20	20	20	n/a	20	35	7	15	7	1	20	2	5	20	8	20	20
125	Rex sole	20	20	20	n/a	20	20	35	7	15	7	1	20	2	5	20	8	20	20
136	Northern rockfish	20	20	20	20	20	20	35	7	15	7	1	20	2	5	20	8	20	20
141	Pacific ocean perch	20	20	20	20	20	20	35	7	15	7	1	20	2	5	20	8	20	20
143	Thornyhead	20	20	20	20	20	20	35	7	15	7	1	20	2	5	20	8	20	20
152/ 151	Shortraker/ rougheye (1)	20	20	20	20	20	20	35	7	15	n/a	1	20	2	5	20	8	20	20
193	Atka mackerel	20	20	20	20	20	20	35	1	5	(1)	10	n/a	2	5	20	8	20	20
270	Pollock	n/a	20	20	20	20	20	35	1	5	(1)	10	20	2	5	20	8	20	20
710	Sablefish	20	20	20	20	20	20	35	n/a	15	7	1	20	2	5	20	8	20	20
Flatfish, deep-water[2]		20	20	n/a	20	20	20	35	7	15	7	1	20	2	5	20	8	20	20
Flatfish, shallow-water[3]		20	20	20	20	20	n/a	35	1	5	(1)	10	20	2	5	20	8	20	20
Rockfish, other (4)		20	20	20	20	20	20	35	7	15	7	1	20	2	5	20	8	20	20
172	Dusky rockfish	20	20	20	20	20	20	35	7	15	7	1	20	2	5	20	8	20	20
Rockfish, DSR-SEO (5)		20	20	20	20	20	20	35	7	15	7	n/a	20	2	5	20	8	20	20
Skates[10]		20	20	20	20	20	20	35	1	5	(1)	10	20	2	n/a	20	8	20	20
Other species (6)		20	20	20	20	20	20	35	1	5	(1)	10	20	2	5	n/a	8	20	20
Aggregated amount of non-groundfish species[11]		20	20	20	20	20	20	35	1	5	(1)	10	20	2	5	20	8	20	20

Notes to Table 10 to Part 679					
1	Shortraker/rougheye rockfish				
	SR/RE	*Sebastes* borealis (shortraker) (152)			
		S. aleutianus (rougheye) (151)			
	SR/RE ERA	Shortraker/rougheye rockfish in the Eastern Regulatory Area (ERA).			
	Where an MRA is not indicated, use the MRA for SR/RE included under Aggregated Rockfish				
	Catcher vessels using hook-and-line, pot, or jig gear are required to retain all rockfish. See § 679.20(j).				
2	Deep-water flatfish	Dover sole (124), Greenland turbot (134), Kamchatka flounder (117), and deep-sea sole			
3	Shallow-water flatfish	Flatfish not including deep-water flatfish, flathead sole (122), rex sole (125), or arrowtooth flounder (121)			
4	Other rockfish	Western Regulatory Area	means other rockfish and demersal shelf rockfish		
		Central Regulatory Area			
		West Yakutat District			
		Southeast Outside District	means other rockfish		
		Other rockfish			
		S. aurora (aurora) (185)	*S. variegates* (harlequin)(176)	*S. brevispinis* (silvergrey)(157)	
		S. melanostomus (blackgill)(177)	*S. wilsoni* (pygmy)(179)	*S. diploproa* (splitnose)(182)	
		S. paucispinis (bocaccio)(137)	*S. babcocki* (redbanded)(153)	*S. saxicola* (stripetail)(183)	
		S. goodei (chilipepper)(178)	*S. proriger* (redstripe)(158)	*S. miniatus* (vermilion)(184)	
		S. crameri (darkblotch)(159)	*S. zacentrus* (sharpchin)(166)	*S. reedi* (yellowmouth)(175)	
		S. elongatus (greenstriped)(135)	*S. jordani* (shortbelly)(181)		
		S. entomelas (widow)(156)	*S. flavidus* (yellowtail)(155)		
		In the Eastern Regulatory Area only, Other rockfish also includes *S. polyspinis* (northern)(136)			
5	Demersal shelf rockfish (DSR)	*S. pinniger* (canary)(146)	*S. maliger* (quillback)(147)	*S. ruberrimus* (yelloweye)(145)	
		S. nebulosus (china)(149)	*S. helvomaculatus* (rosethorn)(150)		
		S. caurinus (copper)(138)	*S. nigrocinctus* (tiger)(148)		
		DSR-SEO = Demersal shelf rockfish in the Southeast Outside District (SEO). Catcher vessels in the SEO have full retention of DSR (see § 679.20(j)).			
6	Other species		Octopuses (870)	Sharks (689)	
7	Aggregated rockfish	Aggregated rockfish (see § 679.2) means any species of the genera *Sebastes* or *Sebastolobus* except *Sebastes ciliates* (dark rockfish), *Sebastes melanops* (black rockfish), and *Sebastes mystinus* (blue rockfish), except in:			
		Southeast Outside District	where DSR is a separate species group for those species marked with an MRA		
		Eastern Regulatory Area	where SR/RE is a separate species group for those species marked with an MRA		
		Catcher vessels using hook-and-line, pot, or jig gear are required to retain all rockfish. See § 679.20(j).			
8	n/a	Not applicable			

Notes to Table 10 to Part 679			
9	Aggregated forage fish (all species of the following taxa)	Bristlemouths, lightfishes, and anglemouths (family *Gonostomatidae*)	209
		Capelin smelt (family *Osmeridae*)	516
		Deep-sea smelts (family *Bathylagidae*)	773
		Eulachon smelt (family *Osmeridae*)	511
		Gunnels (family *Pholidae*)	207
		Krill (order *Euphausiacea*)	800
		Laternfishes (family *Myctophidae*)	772
		Pacific Sand fish (family *Trichodontidae*)	206
		Pacific Sand lance (family *Ammodytidae*)	774
		Pricklebacks, war-bonnets, eelblennys, cockscombs and shannys (family *Stichaeidae*)	208
		Surf smelt (family *Osmeridae*)	515
10	Skates Species and Groups	Alaska (*Bathyraja. Parmifera*)	703
		Aleutian (*B. aleutica*)	704
		Whiteblotched (*Raja binoculata*)	705
		Big Skates (*Raja binoculata*)	702
		Longnose Skates (*R. rhina*)	701
		Other Skates (*Rathyraja* and *Raja* spp.)	700
11	Aggregated non-groundfish	All legally retained species of fish and shellfish, including IFQ halibut, that are not listed as FMP groundfish in Tables 2a and 2c to this part.	
12	Grenadiers	Giant grenadiers (*Albatrossia pectoralis*)	214
		Other grenadiers (all grenadiers that are not Giant grenadiers)	213

Table 11 to Part 679—BSAI Retainable Percentages

BASIS SPECIES		INCIDENTAL CATCH SPECIES																	
Code	Species	Pollock	Pacific cod	Atka mackerel	Alaska plaice	Arrow-tooth	Kam-chatka	Yellow-fin sole	Other flatfish[2]	Rock sole	Flat-head sole	Green-land turbot	Sable-fish[1]	Short-raker/ Rougheye[9]	Aggregated rockfish[6]	Squids[7]	Aggregated forage fish[7]	Other species[4]	Grenadiers (7)	Sculpins
110	Pacific cod	20	na[5]	20	20	35	35	20	20	20	20	1	1	2	5	20	2	20	8	20
121	Arrowtooth	20	20	20	20	na	20	20	20	20	20	7	1	2	5	20	2	3	8	20
117	Kamchatka	20	20	20	20	20	na	20	20	20	20	7	1	2	5	20	2	3	8	20
122	Flathead sole	20	20	20	35	35	35	35	35	35	na	35	15	7	15	20	2	20	8	20
123	Rock sole	20	20	20	35	35	35	35	35	na	35	1	1	2	15	20	2	20	8	20
127	Yellowfin sole	20	20	20	35	35	35	na	35	35	35	1	1	2	5	20	2	20	8	20
133	Alaska Plaice	20	20	20	na	35	35	35	35	35	35	1	1	2	5	20	2	20	8	20
134	Greenland turbot	20	20	20	20	35	35	20	20	20	20	na	15	7	15	20	2	20	8	20
136	Northern	20	20	20	20	35	35	20	20	20	20	35	15	7	15	20	2	20	8	20
141	Pacific Ocean perch	20	20	20	20	35	35	20	20	20	20	35	15	7	15	20	2	20	8	20
152/ 151	Shortraker/ Rougheye	20	20	20	20	35	35	20	20	20	20	35	15	na	5	20	2	20	8	20
193	Atka mackerel	20	20	na	20	35	35	20	20	20	20	1	1	2	5	20	2	20	8	20
270	Pollock	na	20	20	20	35	35	20	20	20	20	1	1	2	5	20	2	20	8	20
710	Sablefish[1]	20	20	20	20	35	35	20	20	20	20	35	na	7	15	20	2	20	8	20
Other flatfish[2]		20	20	20	35	35	35	35	na	35	35	1	1	2	5	20	2	20	8	20
Other rockfish[3]		20	20	20	20	35	35	20	20	20	20	35	15	7	15	20	2	20	8	20
Other species[4]		20	20	20	20	35	35	20	20	20	20	1	1	2	5	20	2	na	8	20
Aggregated amount non-groundfish species[8]		20	20	20	20	35	35	20	20	20	20	1	1	2	5	20	2	20	8	20

[1] **Sablefish**: for fixed gear restrictions, see § 679.7(f)(3)(ii) and (f)(11).
[2] **Other flatfish** includes all flatfish species, except for Pacific halibut (a prohibited species), flathead sole, Greenland turbot, rock sole, yellowfin sole, Alaska plaice, arrowtooth flounder and Kamchatka flounder.
[3] **Other rockfish** includes all "rockfish" as defined at § 679.2, except for Pacific ocean perch; and northern, shortraker, and rougheye rockfish.
[4] The **Other species** includes sharks, skates, and octopuses.
[5] **na** = not applicable
[6] **Aggregated rockfish** includes all "rockfish" as defined at § 679.2, except shortraker and rougheye rockfish. Catcher vessels using hook-and-line, pot, or jig gear are required to retain all rockfish. See § 679.20(j).
[7] **Forage fish, grenadiers, squids and sculpins** are all defined at Table 2c to this part.
[8] All legally retained species of fish and shellfish, including CDQ halibut and IFQ halibut that are not listed as FMP groundfish in Tables 2a and 2c to this part.
[9] Catcher vessels using hook-and-line, pot, or jig gear are required to retain all rockfish. See § 679.20(j).

Table 30 to part 679—Rockfish Program Retainable Percentages

Fishery	Incidental catch species[1]	Sector	MRA as a percentage of total retained rockfish primary species and rockfish secondary species
Rockfish Cooperative Vessels fishing under a CQ permit	*Pacific cod*	*Catcher/Processor*	*4*
	Shortraker/Rougheye aggregate catch	Catcher Vessel	2
	See rockfish non-allocated species for "other species"		
Rockfish non-allocated Species for Rockfish Cooperative vessels fishing under a Rockfish CQ permit	Pollock	Catcher/Processor and Catcher Vessel	20
	Deep-water flatfish	Catcher/Processor and Catcher Vessel	20
	Rex sole	Catcher/Processor and Catcher Vessel	20
	Flathead sole	Catcher/Processor and Catcher Vessel	20
	Shallow-water flatfish	Catcher/Processor and Catcher Vessel	20
	Arrowtooth flounder	Catcher/Processor and Catcher Vessel	35
	Other rockfish	Catcher/Processor and Catcher Vessel	15
	Atka mackerel	Catcher/Processor and Catcher Vessel	20
	Aggregated forage fish	Catcher/Processor and Catcher Vessel	2
	Skates	Catcher/Processor and Catcher Vessel	5
	Other species	Catcher/Processor and Catcher Vessel	20
	Grenadiers	Catcher/Processor and Catcher Vessel	8
Longline gear Rockfish Entry Level Fishery	Use Table 10 to this part.		
Opt-out vessels	Use Table 10 to this part.		
Rockfish Cooperative Vessels not fishing under a CQ permit	Use Table 10 to this part.		

[1] *See Notes to Table 10 to Part 679 for descriptions of species groups.*

Appendix 3 MRA Regulatory Definition

§ ***679.20 (e) Maximum retainable amounts (MRA)*** —

(1) ***Proportion of basis species.*** The maximum retainable amount of an incidental catch species is calculated as a proportion of the basis species retained on board the vessel using:

(i) The retainable percentages in Table 10 to this part for the GOA species categories (except the Rockfish Program fisheries, which are described in Table 30 to this part for the Rockfish Program fisheries); and
(ii) Table 11 to this part for the BSAI species categories.

(2) ***Calculation.***

(i) To calculate the maximum retainable amount for a specific incidental catch species, an individual retainable amount must be calculated with respect to each basis species that is retained on board that vessel.
(ii) To obtain these individual retainable amounts, multiply the appropriate retainable percentage for the incidental catch species/basis species combination, set forth in Table 10 to this part for the GOA species categories (except the Rockfish Program fisheries, which are described in Table 30 to this part for the Rockfish Program fisheries), and Table 11 to this part for the BSAI species categories, by the amount of that basis species, in round-weight equivalents.
(iii) The maximum retainable amount for that specific incidental catch species is the sum of the individual retainable amount.

(3) ***Application.***

(i) For catcher vessels, the maximum retainable amount for vessels fishing during a fishing trip in areas closed to directed fishing is the lowest maximum retainable amount applicable in any area, and this maximum retainable amount must be applied at any time and to all areas for the duration of the fishing trip.
(ii) For catcher/processors fishing in an area closed to directed fishing for a species or species group, the maximum retainable amount for that species or species group applies at any time for the duration of the fishing trip.
(iii) For all vessels not listed in subpart F of this section, the maximum retainable amount for pollock harvested in the BSAI is calculated at the end of each offload and is based on the basis species harvested since the previous offload. For purposes of this paragraph, offload means the removal of any fish or fish product from the vessel that harvested the fish or fish product to any other vessel or to shore.
(iv) The maximum retainable amount for groundfish harvested in the Central GOA by a catcher/processor vessel fishing under a rockfish CQ permit is calculated at the end of each weekly reporting period, and is based on the basis species defined in Table 30 harvested since the previous weekly reporting period, or for any portion of a weekly reporting period that vessel was designated under a vessel check-in as specified in § 679.5(r)(8).

(v) For all vessels not listed in subpart F of this section, the maximum retainable amount for Atka mackerel harvested in the Bering Sea subarea is calculated at the end of each

offload and is based on the basis species harvested since the previous offload. For purposes of this paragraph, offload means the removal of any fish or fish product from the vessel that harvested the fish or fish product to any other vessel or to shore.

(vi) For a catcher/processor with a BSAI Pacific cod trawl mothership endorsement that receives an unsorted codend delivered by a catcher vessel authorized to harvest and that is assigned to PCTC Program Pacific cod, the maximum retainable amount for each species or species group applies at any time for the duration of the fishing trip and must be applied to only the PCTC Program hauls during a fishing trip.