DRAFT FOR COUNCIL FINAL ACTION

Draft Environmental Assessment/Regulatory Impact Review for Proposed Regulatory Amendment

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

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Abstract: This draft 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) fisheries. Federal regulations limit a vessel's retention of primarily groundfish species closed to directed fishing to a percentage of catch of species open to directed fishing, called a maximum retainable amount (MRA). The alternatives under consideration would revise MRA regulations to clarify the definition of a fishing trip, calculations for MRAs, and applications of MRAs (Alternative 2), revise the triggers that end a fishing trip (Alternative 3), add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors (Alternative 4), revise the calculation period for Bering Sea (BS) pollock by Amendment 80 to an annual calculation (Alternative 5), and provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip (Alternative 6). The purpose of this action is to improve the regulations that implement the MRA, to clarify current MRA regulations, make MRA calculations easier, reduce regulatory discards, ease regulatory burden 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 draft EA/RIR analyzes proposed management measures that would apply exclusively to vessels operating in the BSAI and GOA fisheries. A list of relevant terms used throughout this document are listed in Section 1. Federal regulations limit a vessel's retention of primarily groundfish species closed to directed fishing to a percentage of catch of species open to directed fishing, called a maximum retainable amount (MRA). MRAs apply to all federally permitted vessels that retain any groundfish species. MRA regulations include an aggregated amount of non-groundfish species (such as halibut, salmon and crab) which can be used as basis species when participating in those directed fisheries. However, the MRA is zero percent for keeping incidental amounts of these prohibited catch species (PSC) while participating in groundfish fisheries, unless retention is required by other regulations.

MRAs do not control how much a species closed to directed fishing is encountered naturally (the intrinsic rate) or the discarding of those species while participating in other directed fisheries. MRAs only apply to the amount of a species that a vessel may retain. The ability to retain some catch of species closed to directed fishing helps to reduce discarding of those species, allows for full utilization of the TAC of those species, and helps achieve optimum yield (OY). MRAs are a management tool used to limit retention of non-target species by the various vessel sectors. MRAs set limits based on vessel category, season, spatial management area, and authorized fishing gear. MRAs do not limit overall fishing activity or discards which may be limited under other management measures.

The purpose of this action is to improve the regulations that implement the MRA to clarify current MRA regulations, make MRA calculations easier, reduce regulatory discards, ease regulatory burden and address medical, mechanical, and weather issues that can impact MRA calculations. The alternatives under consideration would revise MRA regulations to clarify the definition of a fishing trip, calculations for MRAs, and applications of MRAs (Alternative 2), revise the triggers that end a fishing trip (Alternative 3), add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors (Alternative 4), revise the calculation period for Bering Sea (BS) pollock by Amendment 80 to an annual calculation (Alternative 5), and provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip (Alternative 6).

Purpose and Need

The Council adopted the following purpose and need statement to originate this action on April 9, 2024 (NPFMC, 2024a), and made minor revisions on April 5, 2025 (NPFMC 2025) after receiving the draft analysis for Initial Review.

> *The purpose of this action is to improve the regulations that implement the Maximum Retainable Amount (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, options and methods for analysis in April 2025. Alternatives 2, 3, 4, 5, and 6 are not mutually exclusive.

Alternative 1, No Action

Under the No Action alternative, all regulations related to MRA would remain at status quo. The MRA is the percentage of a species closed to directed fishing that is retained in relation to a 'basis species' that is open to directed fishing. Regulations prohibit a vessel from exceeding an MRA. In most cases, any additional catch amounts must be discarded at sea. 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 (CGOA) Rockfish Program (see Appendix 2 for complete tables) for complete tables). NMFS accounts for all retained and discarded catch and deducts it from the species-specific TAC whether the vessel retains or discards that catch. Only retained catch accrues to an MRA.

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 provide clarification and make minor modifications in 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 (CV) 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 (A80) species, BSAI pollock and BS Atka mackerel MRAs are calculated at the time of the offload and any species open to directed fishing may be used as a basis species for compliance with MRAs.
Option 5: Clarify that MRAs take precedence over improved retention/improved utilization (IR/IU) regulations for CVs delivering catch to a shoreside processor or stationary floating processor when CVs fish in areas with different fishing prohibitions.
Option 6: Update IR/IU regulations for A80 vessels to reflect past Council actions.
Option 7: Revise the definition of directed fishing at 50 CFR 679.2 for vessels participating in the pelagic trawl electronic monitoring program such that vessels deploying pelagic trawl gear are directed fishing for pollock if the amount of pollock is
Suboptions: 51-90 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 (C/Ps) and motherships (not including current offload-to-offload species - BSAI pollock, BS Atka mackerel, and weekly reporting period species in the CGOA Rockfish Program). Two triggers would remain: (1) when all[1] 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.

[1] The Council could consider changing this language from "when all fish or fish product is offloaded" to "when any fish or fish product is offloaded". This is discussed in more detail under Specific Items for Council Attention later in the Executive Summary.

Method 1: Use all basis species accumulated on the vessel when calculating MRAs for each trip regardless of fishery closures and protection areas.
Method 2: Only use basis species accumulated after a change in directed fishing has occurred due to an inseason action or entering a protection area for the species that had a change in status for each trip.

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. (BSAI pollock and BS Atka mackerel are already under an offload-to-offload calculation for non-AFA vessels, and CGOA Rockfish Program is under a weekly MRA calculation.)

Option 1: Add BSAI Pacific cod, GOA Pacific cod, GOA pollock, BS skates, CGOA Rockfish Program, and GOA shallow-water flatfish.
Option 2: Include all groundfish species.

Methods 1 and 2 would only apply to C/Ps and motherships.

Method 1: Use all basis species accumulated on the vessel when calculating MRAs for each trip regardless of fishery closures and protection areas.
Method 2: Only use basis species accumulated after a change in directed fishing has occurred due to an inseason action or entering a protection area for the species that had a change in status for each trip.

Alternative 5: Annual Pollock MRA Calculation for A80

This alternative would apply BS pollock MRA provisions to A80 vessels on an annual basis with the implementation of an incentive plan or other controls to prevent increases in average pollock catch. Establish similar measures for CDQ groups harvesting A80 species to ensure consistency with regulation of harvest statutory requirements.

Alternative 6 – 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.

Environmental Impacts

Alternatives 1, 2, and 6

Alternative 1, the status quo, would maintain current MRA management including instantaneous enforcement of MRAs while vessels are fishing. Alternatives 2 and 6 will have no measurable environmental impacts as they contemplate administrative changes that do not impact timing, location or magnitude of groundfish harvest.

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 C/Ps and motherships (not including current offload-to-offload species - BSAI pollock, BS Atka mackerel, and weekly reporting period species in the CGOA Rockfish Program). The effects of the alternatives on groundfish species in the BSAI and GOA groundfish fisheries are likely neutral. Retention of non-target groundfish would likely increase under Alternative 3, but overall catch would likely remain neutral because all catch is deducted from the total allowable catch (TAC) for each species or species group.

While the level of regulatory discards could decrease, there is the potential for increased harvest of species closed to directed fishing in Steller sea lion (SSL) protection areas that overlap with GOA pollock, BSAI and GOA Pacific cod, and AI Atka mackerel if vessels change their behavior under Alternative 3. There would be no change for BSAI pollock and BS Atka mackerel because these species are already managed as offload-to-offload species under Alternative 1. Alternative 3 could result in additional topping off opportunities inside SSL protection areas which could increase the overall catch of SSL prey species (pollock, Pacific cod, and Atka mackerel) inside these areas. SSL protection areas were established to close specific areas to directed fishing for SSL prey species while still allowing incidental harvest of these species up to the MRA. While the overall decrease in regulatory discards can be viewed positively, the risk of increased catch of GOA pollock, GOA and BSAI Pacific cod and AI Atka mackerel in SSL protected areas could have potentially negative effects for SSLs, especially as the recovery of the western Distinct population segment (wDPS) of SSL stagnates (see Section 5). It is hard to predict how vessels might change behavior to increase topping off in SSL protection areas. If the trigger for calculation of an MRA in relation to entering an area where a different directed fishing prohibition applies (e.g., an SSL protection area) is removed (i.e., Method 1), it could provide an opportunity for vessels to top off at the end of trip when they have the most basis species onboard for SSL prey species in SSL protection areas without additional tools to limit such changes in behavior. Note again that MRAs only control the amount of a species retained, they do not limit the amount of a species caught and discarded in SSL protection areas. Therefore, while Alternative 3 may result in more of a species being retained, that doesn't necessarily mean more of that species would be caught, it could mean more of the catch is retained and less is discarded. However, the location of where this overall catch is harvested could shift if vessels with additional basis species on board choose to alter current fishing behavior. Further, NMFS deducts all fish caught from its TAC or applicable limit, whether that fish is retained or discarded.

Alternative 4 would add specific target species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors, in addition to the current offload-to-offload species - BSAI pollock and BS Atka mackerel. Under Alternative 4, there may be some added risk of approaching Acceptable Biological Catch (ABC) and Overfishing Limits (OFLs) for some species, which are identified in Table 5-1 It is hard to predict how vessel operators may change behavior with offload-to-offload of these additional species. It may provide more clarity to a vessel operator on what they are allowed to retain and allow them to maximize retention of valuable species. In addition, under offload-to-offload calculations, vessels can retain amounts encountered earlier in a trip rather than be required to discard catch as they have under status quo. This should allow more retention overall without increasing overall catch. In fact, a decrease in catch (retained plus discarded catch) is possible. Under status quo a vessel must discard a species early in the trip if they do not have enough basis species onboard, but then may retain or "top off" on that species at the end of the trip to achieve the MRA. If the vessel had been able to keep the species throughout the trip (Alternative 4) then topping off at the end of the trip may be unnecessary because the MRA was already achieved and would result in the same amount of retention but less discarding of that species, thus resulting in a decrease in overall catch. All retained and discarded catch accrues to fishery limits. Catch that approaches fishery limits are actively managed by NMFS inseason management staff to prevent exceeding TAC and OFLs. Thus, though these risks are identified in the analysis, they are

expected to be mitigated by existing fishery management mechanisms and do not have the potential to be environmentally significant.

In addition, and similar to effects of Alternative 3, depending on vessel behavior, catch of SSL prey species could potentially increase in SSL protection areas. The risk of increased catch in SSL protection areas that overlap with GOA pollock, BSAI and GOA Pacific cod and AI Atka mackerel could have potentially negative effects for SSLs, especially as the recovery of the wDPS of SSL stagnates (see Section 5). Under Alternative 4 the instantaneous MRA calculation is no longer in effect and a vessel can top off and retain catch at any point of the fishing trip as long as the MRA is not exceeded at the time of offload. If a vessel tops off on GOA pollock, GOA and BSAI Pacific cod and AI Atka mackerel and chooses to do so in an SSL protection area, the overall amount of catch in the protection area could be greater than under status quo. Note again that MRAs only control the amount of a species retained, they do not limit the amount of a species caught and discarded in SSL protection areas. Therefore, while Alternative 4 may result in more of a species being retained, that doesn't necessarily mean more of that species would be caught, it could mean more of the catch is retained and less is discarded. However, the location of where this overall catch is harvested could shift if vessels with additional basis species on board choose to alter current fishing behavior. Further, NMFS deducts all fish caught from its TAC or applicable limit, whether that fish is retained or discarded.

Methods 1 and 2 under Alternatives 3 and 4

Methods 1 and 2 function similarly under both Alternatives 3 and 4. Under Alternatives 3 and 4, Method 1 represents the scenario that could allow the most topping of GOA pollock, GOA and BSAI Pacific cod and AI Atka mackerel inside SSL protection areas which may result in increased overall catch of these species or more retention of the catch and less discarding inside these areas.

Under Alternative 3, Method 1 includes all basis species accumulated on board up to that specific point in time (the instantaneous MRA is still in effect) but, because the trip triggers have been reduced, the basis species calculation does not reset multiple times while the vessel is at sea. As a result, it is possible the vessel will have more basis species onboard to retain SSL prey species when entering an SSL protection area.

Under Alternative 4, Method 1 includes all basis species accumulated on board by the time of the offload (the instantaneous MRA is no longer in effect) regardless of fishing location or a change in fishing prohibition to calculate the MRA. This would likely mean there would be more basis species onboard as compared to status quo toward the end of trip and should vessels continually choose to top off in SSL protection areas at the end of trips, it could lead to localized depletion of SSL preferred prey items.

Under both Alternatives 3 and 4, Method 2 could mitigate the potential for increased topping off behavior inside SSL protection areas by requiring that MRA calculations start over when entering or leaving an SSL protection area. Under Alternative 3, Method 2 a vessel would be subject to an instantaneous MRA and could only use basis species accumulated inside the SSL protection area. This combination would likely result in the highest amount of discarding because a vessel would not be able to retain the SSL prey species until enough basis species were accumulated from inside the SSL protection area. However, there would also be very little opportunity to intentionally top off on the SSL prey species inside SSL protection areas.

Under Alternative 4, Method 1 a vessel would not be subject to the instantaneous MRA and could use all basis species from both outside and inside the SSL area to retain SSL prey species in the SSL protection area. This combination would likely result in the least amount of discarding because the vessel would not only continue to keep up to the MRA for all basis species onboard, but could also keep additional prey species if the vessel projects they will have enough basis species onboard by the time of the offload. However, this also creates the largest opportunity to top off on SSL prey species inside SSL protection areas. For example, under Alternative 4, if a vessel fished in both an SSL protection area and outside an

SSL protection area while at sea, at the time of offload the vessel would calculate their MRAs for fish harvested within the SSL protection area separately from the MRAs for fish harvested outside the SSL protection area. This would likely deter vessels from topping off inside an SSL protection area because basis species harvested outside the SSL protection area could not be used to accumulate more species closed to directed fishing inside the area, thus lowering the amount of catch retained in SSL protection areas. However, under Method 2 discarding would likely be higher when compared to Method 1.

It is difficult to tell what the differences in discarding and topping off opportunities may be under Alternative 3, Method 1 and Alternative 4, Method 2, but they are both likely to be somewhere in between the highest and lowest amount. Under Alternative 3, Method 1 a vessel would be subject to an instantaneous MRA, but could use outside species currently onboard while inside an SSL area. Because the vessel is subject to an instantaneous MRA, discarding will be required unless there is enough basis species onboard and intentionally topping off may be possible but difficult. Under Alternative 4, Method 2 the vessel is not subject to an instantaneous MRA but can only use basis species from inside the SSL protection area. This could result in discarding if the vessel is unable to obtain enough basis species from inside the SSL protection area. Topping off opportunities will also hinge on how many basis species are accumulated in the SSL protection area for the trip and how much of the MRA species they are encountering naturally.

Alternative 5

Alternative 5 would apply BS pollock MRA provisions to A80 vessels *annually* with the implementation of an incentive plan agreement (IPA) or other controls to prevent increases in average pollock catch. Measures would also be established for CDQ groups that harvest A80 species in order to be consistent with regulation of harvest requirements. By providing an annual accounting period, the regulation may incentivize more overall BS pollock catch (retained plus discarded catch). If that occurs, this could lead to an increase in the A80/CDQ sectors total catch of BS pollock compared to the status quo, where trip-by-trip avoidance behavior may have kept the total annual bycatch below the theoretical maximum. Any increase in BS pollock catch (retained plus discarded catch) would accrue towards the TAC. This may also provide an avenue for increased catch within SSL protection areas that overlap with BS pollock or topping off behavior that may otherwise have been tempered by offload-to-offload accounting. However, moving to an annual MRA calculation would also likely result in less discarding of BS pollock because vessels could retain more BS pollock earlier in the year when it is encountered more frequently instead of discarding. Overall catch would only increase if vessels topped off on pollock early in the year to ensure they retained up to the MRA and then discarded BS pollock later in the year.

BS pollock is not an A80 allocated species and is managed under an incidental catch allowance (ICA) when harvested outside of the directed fishery. All BS pollock not caught in the directed fishery accrues towards the same ICA regardless of the sector or gear type. NMFS prohibits the retention of incidental amounts of BS pollock for all sectors once the ICA is reached, however this does not prevent the further catching and discarding of BS pollock. As a result pollock is not a constraining species for the A80 sector. However, historically the A80 sector has taken the majority of the BS pollock ICA and have worked to ensure the ICA is not exceeded.

In summary, for the proposed action to have negative potential effects on SSL prey levels, a series of events would need to occur. First, the Council would need to choose either Alternative 3, Method 1 or Alternative 4, Method 1; or Alternative 5. Second, the affected sectors would need to choose to alter their behaviors from the status quo to increased topping off in SSL protection areas. Third, topping off would need to occur at a level that negatively impacts SSL localized prey. It is not clear that affected sectors would change behavior, or if that occurred, that the additional topping off would be at levels significant to SSL prey availability. However, if prey was depleted so as to detrimentally affect SSLs, this could require Council action in the future and could lead to reevaluation of coverage under the ESA. Alternative 3, Method 1, Alternative 4, Method 1, and Alternative 5 provide for increased opportunity to increase catch,

or increase retention and reduced discards at status quo catch levels, within SSL protection areas through topping off behavior, as compared to selection of Alternative 3, Method 2, Alternative 4, Method 2 or no selection of Alternative 3, 4 and 5. However, while the opportunity for increased catch within SSL protection areas may be provided through selection of specific Alternatives, there are current barriers or deterrents that will likely prevent a drastic increase in topping off behavior thus keeping overall catch inside these areas similar to status quo (see Section 5).

Economic and Social Impacts

Alternative 1

Under the No Action alternative, all regulations related to MRA would remain unchanged, resulting in continued lost revenue, continued mortality for high-value species closed to directed fishing (due to discarding at the beginning of a trip and "topping off" later in a trip), and the continued need for additional fishing effort to maximize retention. Alternative 1 would also not allow for unforeseen circumstances like medical emergencies, mechanical issues, or poor weather, meaning vessels remain responsible for MRA compliance even if a trip is cut short.

Alternative 2

Alternative 2 would reduce ambiguity and improve clarity in how MRAs currently operate, this alternative does not change how MRAs are calculated. The main economic and social benefits would be reduced burden in enforcement actions, as clarity would be provided for how to interpret or what regulations take precedent in specific situations including retention situations, when delivering unsorted codends and when different fishing prohibitions are in place for each fishery management program.

Alternative 3

Overall, eliminating the selected trip triggers for C/Ps and motherships under the proposed action would result in fewer but longer fishing trips, which would increase operational flexibility for vessels. This alternative would allow vessels that would have otherwise been required to discard valuable species closed to directed fishing at the beginning of trips triggered between offloads the opportunity to retain economically valuable species due to a longer trip period being applicable to the MRA calculation. The instantaneous MRA would remain in place. It would also allow increased opportunities for vessels to "top off" at the end of each fishing trip on valuable species closed to directed fishing not yet harvested to the full MRA. These changes are analyzed in a series of possible scenarios of fleet behavior (Section 6.4.3) that estimate reductions in regulatory discards that are considered beneficial. Since NMFS accounts for all catch (retained and discarded) and deducts it from the TAC, topping off can help fully harvest the TAC resulting in more seafood entering commerce.

Alternative 4 Options 1 and 2

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 required to discard valuable species closed to directed fishing due to the instantaneous MRA calculation to now have the opportunity to retain more of those economically valuable species. The ability to retain these valuable species that would otherwise be discarded under status quo would 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. Since NMFS accounts for all catch and deducts it from the TAC, being able to retain catch instead of discarding it allows more seafood to enter commerce.

Alternative 5

Aligning MRA calculations with a longer accounting period for BS pollock would improve retention in A80 and CDQ vessels fishing A80 species, and ease compliance burdens by consolidating enforcement efforts over time rather than on a per-trip basis. This enables more strategic, long-term planning and allows A80 vessels and CDQ vessels fishing 80 species to operate more efficiently and utilize more pollock catch in the multi-species flatfish fisheries.

Alternative 6

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. If a vessel has to end its fishing trip earlier than expected due to an emergency, and the vessel is over the MRA for BSAI pollock or BS Atka mackerel, a violation may result if the vessel offloads any fish or fish product. This alternative is applicable only to vessels with offload-to-offload or weekly reporting period MRA calculation periods, since operators of these vessels have the flexibility to accumulate species closed to directed fishing so long as they are not over the MRA by the time they offload or at the end of the weekly reporting period. Other vessels subject to instantaneous application of MRAs would not have a need to request or use such an exemption because vessels subject to instantaneous MRA's would be required to comply with the applicable MRAs at all times during a fishing trip. For a vessel that is offload-to-offload, the vessel would not be in violation of exceeding the MRA unless it offloaded some or all fish or fish product from the vessel. Therefore, if a vessel returns to port unexpectedly and is over the MRA for BSAI pollock or BS Atka mackerel, the vessel must retain all product onboard to avoid violating the MRA regulations. In some instances, where an emergency causes an early return to port, it is economically advantageous for vessels to offload some, or all, of the product onboard. Therefore, Alternative 6 would provide economic benefits to vessels that would otherwise be required to retain all product onboard when in port because of an emergency.

Comparison of Alternatives for Decision-making

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, Alternative 5, and Alternative 6. The impacts of Methods 1 and 2 within Alternatives 3 and 4 are detailed within the discussion of each Alternative.

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	Alternative 6
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 pelagic trawl EM program. If pollock is 51-90% 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)	Change MRA accounting period for BS pollock from offload-to-offload to an annual basis for A80 vessels	Implement regulatory exemptions from MRA requirements in cases of medical, mechanical, or weather emergencies that end a fishing trip.
Management & Enforcement Considerations							
Regulatory Complexity	Current regulations are complex and difficult to comply with.	Improves clarity in current regulations & reflects current operations.	Removes conflicting reg. requirements for pelagic trawl EM vessels that harvest above the MRA (simultaneous retention & 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.	Would likely simplify the regulatory framework and reduce the administrative burden on the A80 fleet. Could put vessels at risk of being over the yearly MRA in certain cases.	Would include codifying parameters that constitute an emergency.
Enforcement	Current regulations are complex and are difficult to interpret.	Clarifies regulations; easier for OLE to interpret and enforce.	Removes regulatory bind; easier for vessels to remain in compliance.	Concerns surrounding the ability to enforce the prohibition on directed fishing for pollock, Pacific cod, or Atka mackerel in SSL protection areas. Verbiage “all fish or fish product” in the remaining offload trigger is envisioned to be problematic as catcher/processors and motherships often perform only partial offloads or retain some catch for personal use.	Concerns surrounding the ability to enforce the prohibition on directed fishing for pollock, Pacific cod, or Atka mackerel in SSL protection areas.	Tracking basis species accumulation may introduce enforcement complexities. Determination of IR/IU compliance or violations may also present challenges.	Exemptions due to weather are difficult to define & enforce.

	Alternative 1, No Action	Alternative 2, Options 1-6	Alternative 2, Option 7	Alternative 3	Alternative 4, Options 1 & 2	Alternative 5	Alternative 6
Groundfish Retention and Discards							
Regulatory Discards	Requires regulatory discards which are deducted from the TAC but do not accrue to the MRA.	Status quo conditions.	May reduce discards for pelagic trawl 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.	Likely to result in reduction of reg. discards of pollock in the A80 sector. Reduction in reg. discards is viewed as economically & environmentally beneficial.	May reduce discards in emergency situations cases.
Overall Economic Impacts	Status quo conditions, regulatory discards remain at current levels.	No impacts.	No impacts.	Expected to be positive. Magnitude of impact varies by sector & is reliant on changes in strategic vessel behavior.	Expected to be positive. Magnitude of impact varies by sector & is reliant on changes in strategic vessel behavior.	Expected to be positive for A80 sector. Low risk of increases in pollock harvest that would result in negative allocative impacts for primary pollock user groups if realized. Incentive plans and other tools would mitigate this risk.	Neutral to positive; vessels may avoid regulatory violations in emergency situations.
Environmental Impacts							
Overall Economic Impacts	Status quo conditions, regulatory discards remain at current levels.	No impacts.	No impacts.	Expected to be positive. Magnitude of impact varies by sector & is reliant on changes in strategic vessel behavior.	Expected to be positive. Magnitude of impact varies by sector & is reliant on changes in strategic vessel behavior.	Expected to be positive for A80 sector. Low risk of increases in pollock harvest that would result in negative allocative impacts for primary pollock user groups if realized. Incentive plans and other tools would mitigate this risk.	Neutral to positive; vessels may avoid regulatory violations in rare cases.

	Alternative 1, No Action	Alternative 2, Options 1-6	Alternative 2, Option 7	Alternative 3	Alternative 4, Options 1 & 2	Alternative 5	Alternative 6
Groundfish Species	Status quo conditions, no impacts to groundfish species.	No impacts.	No impacts.	Retention of non-target groundfish would likely increase. Overall harvest would likely remain neutral.	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.	Additional flexibility may incentivize A80 fleet to increase overall pollock harvest, within ICA limits. Risk of substantial increase in pollock harvest is low, and incentive plans or other management tools would mitigate this risk.	No impacts.
Marine Mammals (SSL)	Status quo conditions, no impacts to marine mammals.	No impacts.	No impacts.	Potential for increased or decreased harvest of certain SSL prey species (Pacific cod and Atka mackerel), in SSL protection areas. Magnitude and distribution of impact dependent on vessel behavior. Should changes in fleet behavior result in increased harvest of important SSL prey species inside SSL protection areas, localized depletion of prey could become an issue.	Potential for increased or decreased harvest of certain SSL prey species (Pacific cod and Atka mackerel) in SSL protection areas. Magnitude and distribution of impact is dependent on vessel behavior. Should changes in fleet behavior result in increased harvest of important SSL prey species inside SSL protection areas, localized depletion of prey could become an issue.	Potential for increased or decreased harvest of certain SSL prey species (Pacific cod and Atka mackerel) in SSL protection areas. Magnitude and distribution of impact is dependent on vessel behavior. Should changes in fleet behavior result in increased harvest of important SSL prey species inside SSL protection areas, localized depletion of prey could become an issue.	No impacts.

Specific Items for Council Attention

Inclusion of FMP Area Change as Trip Trigger

Regardless of which Alternatives the Council selects for final action, there are three trip triggers that end a trip that must remain in effect for the purposes of calculating MRAs on C/Ps and motherships: 1) when all fish or fish product is offloaded, 2) if the vessel changes gear type, and 3) when the vessel changes FMP area. The third trigger is currently captured under the area-based trigger (when a vessel enters or leaves an area where a different fishing prohibition applies at 679.2). If this regulatory trigger was removed (via Alternative 3 or Alternative 4), NMFS has determined that a new trip is necessary when entering a new FMP area due to the many differences between the MRA percentages for species in the BSAI and GOA. If Alternative 3 or Alternative 4 are selected for final action, this additional new trip trigger should be added.

Clarification of the Offload Trip Trigger

Under current regulation the offload trip trigger for C/Ps and motherships is "when all fish or fish product is offloaded," and for CVs the definition of a trip is "from the time harvesting of groundfish begins until the offload or transfer of all fish or fish product from that vessel." However, vessels do not always fully offload. Sometimes a vessel keeps some fish or fish product onboard into their next trip. For example, under status quo, a C/P may offload all fish product in the middle of the week except for one box of sablefish. Because this box of sablefish was not offloaded the trip does not end for the purposes of MRA calculations. If the vessel begins fishing again after the partial offload, then the same fishing trip continues for MRAs until one of the other trip triggers are met, such as the end of a weekly reporting period. Changing the wording of this trip trigger from "when all fish or fish product is offloaded" to "when any fish or fish product is offloaded" would provide clarity and likely be easier to track. Further clarification on the timeframe for the MRA calculation could state any fish harvested during the fishing trip would be used for the MRA calculations regardless of if they were offloaded or not.

Although rarer, CVs also do not always fully offload and may begin harvesting additional fish with some fish still onboard. As a result, a CV could theoretically be engaged in one fishing trip for the purposes of MRA calculations for an entire season if small amounts of fish were retained onboard after each offload. Modifying the definition of a fishing trip for CVs from "the offload or transfer of all fish or fish product" to "the offload or transfer of any fish or fish product" would allow for MRAs to be calculated at the time of each offload and could be based on the amount offloaded before additional harvest is accumulated. This may provide clarity and ease the complexity of MRA calculations for CVs and OLE.

Under Alternative 4, the analysts assume this trigger would be changed to correspond with current regulatory offload applications for BSAI pollock and BS Atka mackerel. For example, for BSAI pollock the current MRA application regulation states that "*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*." Similar language stating that an offload includes the removal of any fish or fish product and that the MRA calculation is based on the basis species harvested since the previous offload should be added if Alternative 4 is selected.

Additional Regulations to Consider Under Alternatives 3 and 4

Alternative 3 seeks to eliminate three of the five trip triggers for C/Ps and motherships and Alternative 4 seeks to add more or all species to an offload MRA calculation. Similar to regulations in place for CVs, regulations at 50 CFR 679.20(e)(3)(ii) currently state that a C/P 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. Currently this regulation does not have any effect because when a C/P enters an area with a different fishing prohibition the fishing trip for MRA calculations resets. However, if this regulation remains in place for C/Ps and the Council chooses Alternative 3 or 4, a C/P would be restricted to the lowest MRA area that was fished for the entire fishing trip. For example, if a C/P fished inside an SSL protection area where Pacific cod was closed and then entered an area where Pacific cod was open, the C/P could only keep up to MRA levels of Pacific cod in the open area because the fishing trip did not start over and they already fished in an area where Pacific cod was closed to directed fishing. This would likely result in increased discards and less overall harvest but would also likely discourage C/Ps from fishing inside SSL protection areas. The Council should specify if this regulation should remain in effect or be removed under Alternatives 3 and 4.

Clarifications within Trip Trigger Definition

For C/Ps and motherships, there has been some confusion over two aspects of the definition of a fishing trip, at 50 CFR 679.2 (definition of "fishing trip" at para. (1)(i)). First, the use of the word "resumed" when defining the fishing trip period has been incorrectly interpreted by industry as meaning that a vessel may fish in an area, enter a new area with a different fishing prohibition and fish, and then return to the first area to continue the first trip. This is not the case. Each time a vessel leaves an area and begins fishing in an area with a different fishing prohibition, the previous trip ends and cannot be resumed. The word resumed is referencing if the vessel ceases fishing in an area for an amount of time (for example due to weather) and then starts fishing again in the same area before any of the other triggers are met. The regulation currently reads that an operator is engaged in a fishing trip until any of the events listed underneath occur. In other words, once one of those events occurs the previous trip has ended and cannot be resumed. The Council may want to consider recommending removing the word "resumed" from the fishing trip definition, or clarifying the meaning and how it should be applied in regulation.

There are cases where a C/P uses more than one gear type during their voyage. In some cases, they are actively pulling pot gear while hook-and-line gear is soaking and vice versa. Sometimes they will move between the two gear types throughout the day or week. It is also allowable to have both longline pot and hook-and-line gear on the same line. Because the trip ends once they stop one gear type and begin fishing with another, and because a trip cannot be resumed, this can cause a multitude of fishing trips and maybe even result in a single pot being a fishing trip. The Council may want to clarify under Alternative 2 or 3 if this is how a fishing trip is intended to be defined when a vessel changes gear types. A possible option is to clarify that when fishing with different gear types, each gear is its own unique fishing trip and that those fishing trips can happen simultaneously.

Second, the regulation states that a fishing trip ends for C/Ps and motherships when the vessel enters or leaves an area where a different directed fishing prohibition applies. This means a trip ends when a different fishing prohibition applies to that specific vessel, and not when entering an area with a different fishing prohibition regulation. For example, if pollock is closed to a vessel both outside and inside an SSL protection area, a new trip for MRA calculations is not triggered when the vessel enters the SSL protection area. However, if Pacific cod is open to a vessel outside the SSL protection area and closed inside the SSL area, then a new trip is triggered when the vessel enters the SSL protection area due to the change of status of Pacific cod for that vessel.

Steller Sea Lion (SSL) 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 2006. An MRA accounting interval change (from instantaneous to offload-to-offload) was proposed, but was later withdrawn and never implemented. The item considered by the Council in 2006 sought to decrease the interval (*i.e.,* offload-to-offload) of MRA calculations for the head and gut (H&G) trawl C/P

sector (now the A80 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 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.

The proposed rule was 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 Appendix 1b,

Analysts note that the concerns associated with Alternatives 3, 4 and 5 (identified within Sections 4.4 and 5.2.1), and the potential environmental impacts in SSL protection areas (identified within Section 5.3.5) are similar to the concerns that the Council's December 2006 revision sought to remedy. To address these concerns, in the April 2025 Council motion, the Council asked analysts to compare two different methods for MRA calculations under Alternatives 3 and 4. Method 1 would allow for all basis species to be used on the vessel regardless of where the vessel is fishing. Method 2 would only allow basis species to be used that were accumulated inside the SSL protection area or after a change in fishery status. The impacts of these two methods are discussed above under environmental impacts.

Enforcement Considerations

OLE has provided information for each alternative for the Council's consideration contained in Section 4.5 of this analysis

Directed Fishing Definition, and Interrelation with MRA Definition

The definition of directed fishing is interrelated with the definition of 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 or species group on board a vessel that is greater than the maximum retainable amount for the species or species group as calculated under § 679.20*" (50 CFR 679.2, definition of "directed fishing" para. (1)). The current definition assumes that a vessel that retains a higher amount of one species in excess of the MRA intended to target that species. In reality, a vessel may target a high-value species that is closed to directed fishing without going over the MRA (known as topping off) or accidentally go over the MRA for a less desirable species (as described in Alternative 2 Option 7). The definition of "directed fishing" is also interrelated with many gear requirements, gear prohibitions, closures, SSL protection areas, license limitation and limited access privilege programs, and observer program requirements.

This definition of "directed fishing" was implemented in a time when fisheries were managed via weekly production reports that vessels faxed to NMFS. Data availability has expanded considerably since this definition was originally developed, notably with the availability of trip-specific data on target species. Because this more refined 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. However, this is outside of the scope of this analysis.

1 Introduction

This draft Environmental Assessment / Regulatory Impact Review (EA/RIR) analyzes proposed management measures that would apply exclusively to vessels operating in the BSAI and GOA fisheries. Federal regulations limit a vessel's retention of species closed to directed fishing to a percentage of catch of species open to directed fishing, called a maximum retainable amount (MRA). The alternatives under consideration would revise MRA regulations to clarify the definition of a fishing trip, calculations for MRAs, and applications of MRAs (Alternative 2), revise the triggers that end a fishing trip (Alternative 3), add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors (Alternative 4), revise the calculation period for BS pollock by Amendment 80 (A80) to an annual calculation (Alternative 5), and provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip (Alternative 6). The purpose of this action is to improve the regulations that implement the MRA to clarify current MRA regulations, make MRA calculations easier, reduce regulatory discards, ease regulatory burden and address medical, mechanical, and weather issues that can impact MRA calculations.

This document is a draft EA/RIR. A draft EA/RIR provides assessments of the environmental impacts of a proposed action and its reasonable alternatives (the draft 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 draft 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 (NEPA), Presidential Executive Order (E.O.) 12866 (i.e., significant regulatory action review), and some of the requirements of the Regulatory Flexibility Act (RFA). A draft EA/RIR is a standard integrated 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, while also efficiently meeting the analytical requirements of multiple Federal laws and E.O.s.

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 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 fisheries in the EEZ off Alaska are managed under both the BSAI and GOA FMPs. 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 E.O.s.

Important Terms

Bycatch or *bycatch species* is defined at § 679.2 and means fish caught and released while targeting another species or caught and released while targeting the same species.

Catch is defined at § 600.10 and includes, but is not limited to, any activity that results in killing any fish or bringing any live fish on board a vessel.

Directed fishing is defined at § 679.2 and means:

(1) ***Unless indicated otherwise,*** any fishing activity that results in the retention of an amount of a species or species group on board a vessel that is greater than the maximum retainable amount for that species or species group as calculated under § 679.20.

(2) With respect to license limitation groundfish species, directed fishing as defined in paragraph (1) of this definition.

(3) With respect to crab species under this part, the catching and retaining of any crab species.

(4) With respect to the harvest of groundfish by AFA catcher/processors and AFA catcher vessels, any fishing activity that results in the retention of an amount of a species or species group on board a vessel that is greater than the maximum retainable percentage for that species or species group as calculated under § 679.20.

(5) ***With respect to the harvest of flatfish in the Bering Sea subarea,*** for purposes of nonpelagic trawl restrictions under § 679.22(a) and modified nonpelagic trawl gear requirements under §§ 679.7(c)(5) and 679.24(f), fishing with nonpelagic trawl gear during any fishing trip that results in a retained aggregate amount of yellowfin sole, rock sole, Greenland turbot, arrowtooth flounder, flathead sole, Alaska plaice, and other flatfish that is greater than the retained amount of any other fishery category defined under § 679.21(b)(1)(ii) or of sablefish.

(6) ***With respect to the harvest of flatfish in the Central GOA Regulatory Area,*** for purposes of modified nonpelagic trawl gear requirements under §§ 679.7(b)(9) and 679.24(f), fishing with nonpelagic trawl gear during any fishing trip that results in a retained aggregate amount of shallow-water flatfish, deep-water flatfish, rex sole, arrowtooth flounder, and flathead sole that is greater than the retained amount of any other trawl fishery category as defined at § 679.21(d)(3)(iii).

Discard is defined at § 600.10 and means to release or return fish to the sea, whether or not such fish are brought fully on board a fishing vessel.

Fishing trip is currently defined in regulation 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.

Harvesting or harvest is defined at § 679.2 and means the catching and retaining of any fish.

Incidental catch or *incidental catch species* is defined at § 679.2 and means fish caught and retained while targeting on some other species, but does not include discard of fish that were returned to the sea.

Offload-to-offload is used to refer to the period of time starting with the time the harvesting, receiving, or processing of groundfish is begun until the offload or transfer of any fish or fish product from that vessel.

Retain on board is defined at § 600.10 and means to fail to return fish to the sea after a reasonable opportunity to sort the catch.

Steller sea lion prey species are Pacific cod, Atka mackerel, and pollock.

Topping off is a colloquial term meaning a fishing behavior where vessels intentionally catch greater quantities of a species that is closed for directed fishing, but remain under the MRA of incidental catch allowed.

1.1 Purpose and Need

The Council adopted the following purpose and need statement to originate this action on April 5, 2025 (NPFMC, 2025).

> *The purpose of this action is to improve the regulations that implement the Maximum Retainable Amount (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 often leads 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 Chapter 2).

During the drafting of the initial review analysis, staff also analyzed an alternative that the Council passed via a separate motion in June of 2024. This motion initiated a regulatory amendment analysis to address MRA calculations for Pacific ocean perch (POP) in the trawl EM fisheries (NPFMC, 2024c). The action alternatives within the Council's June 2024 motion are shown below:

Alternative 2. Remove POP from the aggregated 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% or greater of total catch.

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 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.

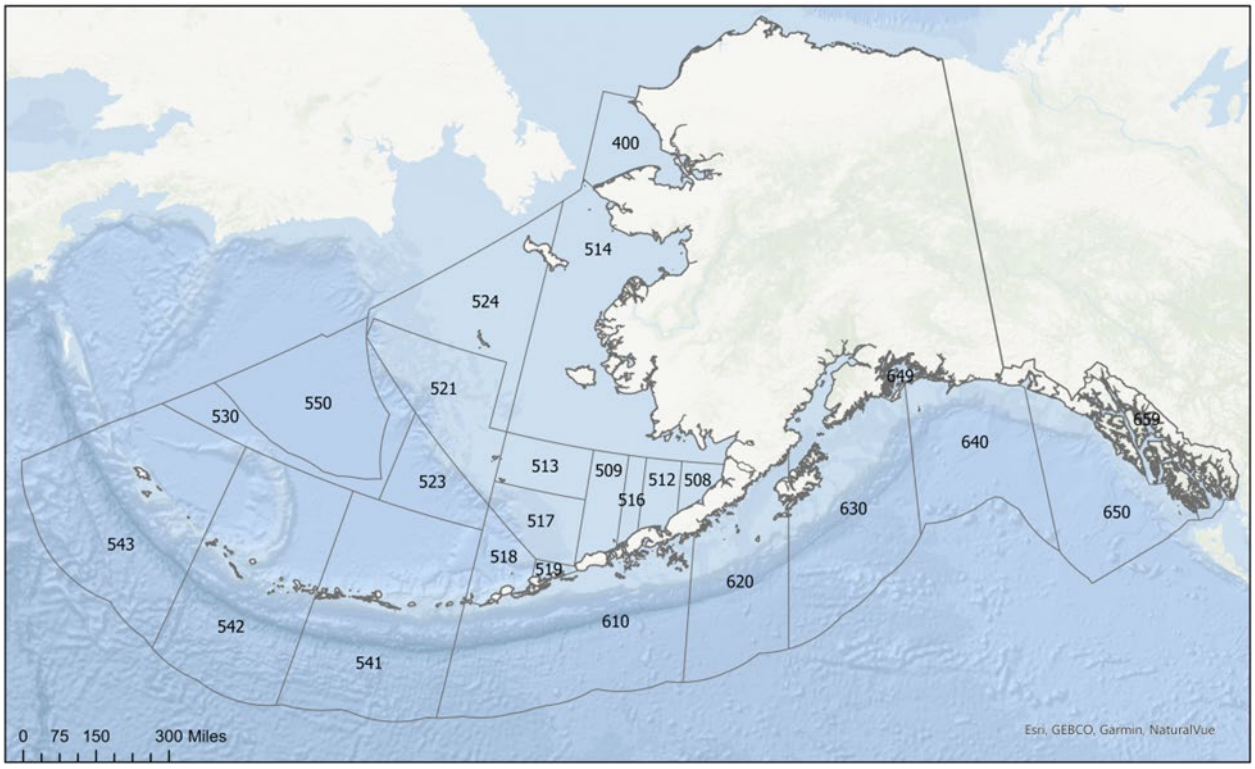
During the April 2025 Council meeting, a draft EA/RIR was presented to the Council for initial review. The analysis was also reviewed by the Council's Enforcement Committee, Scientific and Statistical Committee, and Advisory Panel at this juncture. Upon receiving and reviewing the draft analysis, the Council moved the analysis forward for final action, with several revisions to the purpose and need statement and suite of alternatives and options for analysis (see Section 1.1 and Chapter 2). The Council concurred with staff recommendations regarding the addition of Alternative 3 of the Council's June 2024 MRA motion into this analysis. This alternative was included in the Council's April 2025 motion as Alternative 2, Option 7, with the addition of a suboption.

For additional history on evolution and development of MRA regulations, see Appendix 1.

1.3 Action Area

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

Table 1-1 NMFS statistical areas associated with the BSAI and the GOA



1.4 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. Although MRA regulations apply primarily to groundfish fisheries, regulations include an MRA for an aggregate amount of non-groundfish species (such as halibut, salmon, and crab) which can be used as basis species when participating in those directed fisheries. However, the MRA percent is zero for keeping incidental amounts of these prohibited catch species (PSC) while participating in groundfish fisheries. MRAs apply to any federally permitted vessel that retains groundfish in the EEZ. This analysis focuses on the groundfish fisheries of Alaska, however any alternatives chosen by the Council would apply to all Alaska fisheries that retain groundfish and not just groundfish fisheries.

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 BSAI 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 FMP for Groundfish of the GOA, the FMP for Groundfish of the BSAI Management Area, and the Magnuson-Stevens 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.[2]

Alaska Marine Mammal Stock Assessments, 2023 (Young et al. 2024)

Marine mammal Stock Assessment Reports (SARs) are published annually[3] 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 5.3.

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[4] review recent research and provide estimates of the biomass of each species and other biological parameters. The SAFE report includes the acceptable biological catch (ABC) specifications used by NMFS in the annual harvest specifications. The SAFE report also summarizes available information on the ecosystems and the economic condition of the groundfish fisheries off Alaska.

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[5] 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) SSL and adversely modify designated critical habitat for SSLs. 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 SSL populations in the western and central Aleutians and the Aleutian Islands (AI) Atka mackerel, pollock, and Pacific cod fisheries. NMFS subsequently modified SSL protection measures in the AI Atka mackerel and Pacific cod fisheries in 2011 (75 FR 77535, December 13, 2010; corrected 75 FR 81921, December 29, 2010) and in the AI 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 SSL or adversely modify the designated SSL critical habitat.

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

This consultation[6] considered the Federal groundfish fisheries and State of Alaska parallel groundfish fisheries for Atka mackerel, Pacific cod, and pollock primarily in the AI subarea. This consultation also considered proposed research to better understand the potential effects of these fisheries on SSLs and on the efficacy of conserving prey in areas closed to fishing. NMFS determined that the action, as proposed,

2 Available from https://alaskafisheries.noaa.gov/fisheries/groundfish-harvest-specs-eis

3 Available from https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessment-reports

4 Available from https://www.npfmc.org/library/safe-reports/

5 Available from https://www.fisheries.noaa.gov/resource/document/biological-opinion-authorization-alaska-groundfish-fisheries

6 Available from https://www.fisheries.noaa.gov/resource/document/final-environmental-impact-statement-steller-sea-lion-protection-measures

was not likely to jeopardize the continued existence of the Western DPS of SSLs or destroy or adversely modify its designated critical habitat.

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

This consultation[7] considered the federal groundfish fisheries and State of Alaska parallel groundfish fisheries in the GOA. 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, SSLs, listed fish evolutionary significant units (ESUs), or the proposed listed sunflower sea star.

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

2 Description of Alternatives

The NEPA requires that an EA analyze a reasonable range of alternatives consistent with the purpose and need for the proposed action. The alternatives, further described in this chapter, were designed to accomplish the stated purpose and need for the action.

In April of 2025, the Council adopted the following alternatives for analysis (NPFMC, 2025):

Alternative 1: Status Quo. Federal Regulations at 50 CFR 679.20(e) establish MRAs as a percent of a basis species in Table 10 of 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. 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 to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) applications of MRAs. These changes provide clarification and make minor modifications in 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 any species open to directed fishing may be used as a basis species for compliance with MRAs.

Option 5 – Clarify that MRAs take precedence over improved retention/improved utilization (IR/IU) regulations for catcher vessels delivering catch to a shoreside processor or stationary floating processor when catcher vessels fish in areas with different fishing prohibitions.

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

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

Suboptions: 51-90 percent or greater of total catch.

Alternative 3: 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.

Method 1 - Use all basis species accumulated on the vessel when calculating MRAs for each trip regardless of fishery closures and protection areas.

Method 2 - Only use basis species accumulated after a change in directed fishing has occurred due to an inseason action or entering a protection area for the species that had a change in status for each trip.

Alternative 4: Add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors.

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

Option 2 – Include all groundfish species.

Methods 1 and 2 would only apply to catcher processors and motherships.

Method 1 – Use all basis species accumulated on the vessel when calculating MRAs for each trip regardless of fishery closures and protection areas.

Method 2 – Only use basis species accumulated after a change in directed fishing has occurred due to an inseason action or entering a protection area for the species that had a change in status for each trip.

Alternative 5: Apply Bering Sea pollock MRA provisions to Amendment 80 vessels on an annual basis with the implementation of an incentive plan or other controls to prevent increases in average pollock catch. Establish similar measures for CDQ groups harvesting Amendment 80 species to ensure consistency with regulation of harvest statutory requirements.

Alternative 6: Provide exemptions in regulation from MRA requirements in cases when medical emergencies, mechanical emergencies, or poor weather end a fishing trip.

These alternatives are described in detail and compared further below. Alternatives 2, 3, 4, 5, and 6 are not mutually exclusive.

2.1 Alternative 1, No Action

Under the No Action alternative, all regulations related to MRA would remain. Federal regulations 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 (CGOA) Rockfish Program (full tables available in Appendix 2 and regulations in Appendix 3). 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. The ability to retain some catch of species closed to directed fishing helps to reduce discarding of those species, allows for full utilization of the TAC of those species, and helps achieve optimum yield (OY).

An MRA, defined at 50 CFR 679.20(e), allows for some retention of species or species groups (species) closed to directed fishing (incidental catch species) while fishing for species 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. MRA regulations apply to all Alaska federally permitted fisheries (groundfish, halibut, and aggregated amounts of non-groundfish species). MRAs primarily affect groundfish fisheries. However, non-groundfish species, including halibut, crab, and salmon, can be used as a basis species when open to directed fishing to retain groundfish species. For example, a vessel harvesting halibut IFQ can retain groundfish up to the MRA for that species. Non-groundfish species have an MRA percentage of zero for keeping incidental amounts of those species while participating in groundfish fisheries, unless retention is required under other regulations.

MRAs only apply to the amount of a species that may be retained. MRAs do not control how much a species closed to directed fishing is encountered naturally (the intrinsic rate) or the discarding of those species while participating in other directed fisheries.

The percentage of a species closed to directed fishing that is retained in relation to a basis species must not exceed the amounts listed in Tables 10, 11, and 30 of 50 CFR part 679 (full tables available in Appendix 2). 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% (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% 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

A groundfish fishing trip for the purposes of calculating MRAs begins from the time harvesting, receiving, or processing of groundfish is begun or resumed 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 C/Ps 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.*

For C/Ps and motherships there has been some confusion over two aspects of this definition. First, the use of the word "resumed" when defining the fishing trip period has been incorrectly interpreted by industry to mean that a vessel may fish in an area, enter a new area with a different fishing prohibition and fish,

and then return to the first area to continue the first trip as long as it is within the same weekly reporting period. This is not the case. Each time a vessel leaves an area and begins fishing in an area with a different fishing prohibition, the previous trip ends and cannot be resumed. The word resumed is referencing if the vessel ceases fishing in an area for an amount of time (for example due to weather) and then starts fishing again in the same area before any of the other triggers are met. The regulation currently reads that an operator is engaged in a trip until any of the events listed underneath occur. In other words, once one of those events occurs the previous trip has ended and cannot be resumed.

Second, the regulation states that a fishing trip ends for C/Ps and motherships when the vessel enters or leaves an area with a different directed fishing prohibition. This means a new trip starts when a different fishing prohibition applies to that specific vessel, and not when entering an area with a different fishing prohibition regulation. For example, if pollock is closed to a vessel both outside and inside an SSL protection area, a new trip for MRA calculations is not triggered when the vessel enters the SSL protection area. However, if Pacific cod is open to a vessel outside the SSL protection area and closed inside the SSL area, then a new trip is triggered when the vessel enters the SSL protection area due to the change of status of Pacific cod for that vessel.

The interplay between the definitions of directed fishing and MRAs is essential to understanding fisheries management in the North Pacific fisheries. Under federal regulation at 50 CFR 679.2, "directed fishing" is defined as the retention of a species that exceeds an allowable MRA percentage relative to the retained basis species. When a species is closed to directed fishing, retention of that species is limited to the MRA. MRAs do not prohibit the catching and discarding of the species that is closed to directed fishing, nor do they eliminate interactions or reduce the intrinsic rate of encountering that species. Vessels encountering a species closed to directed fishing may retain that species up to the MRA and must discard any catch exceeding the MRA (with a few exceptions where discarding is not permitted). This distinction between overall catch (discards plus retained) and retention is crucial for understanding inseason quota tracking, operational compliance by the fleet, and enforcement.

The definitions of directed fishing and MRAs allow for a fishing behavior colloquially called “topping off.” Fishermen, recognizing the value of species such as sablefish or Pacific cod, may adjust operations to target these economically valuable species up to the MRA. MRAs are a tool used to control the amount of “topping off” that can occur for species closed to directed fishing and help ensure TAC is harvested at a more controlled pace for species that have a low TAC available. “Topping off” is not prohibited nor should it necessarily be considered a negative activity since it helps achieve OY of some species. NMFS considers the MRA regulations and anticipates “topping off” behavior when making inseason management decisions.

The MRA framework plays a key role in how NMFS responds to overall catch rates and issues directed fishing closures. Before a species' TAC is fully achieved, a closure to directed fishing may be implemented to limit further retention and slow the rate of TAC accrual. After a directed fishing closure, retained catch under MRAs continues to accrue towards the TAC. The ability to set aside TAC as incidental catch after closing a species to directed fishing and the ability to rely on MRA regulations to control future catch enables NMFS to avoid exceeding TACs of these species while still allowing other fisheries to be prosecuted. For example, the Pacific cod TAC may be too low to support a directed fishery based on anticipated participation. As a result, NMFS closes Pacific cod to directed fishing. Although closed, MRAs and topping off may allow the Pacific cod TAC to be fully harvested while minimizing the risk that the TAC will be exceeded. In addition, other fisheries in the area that intrinsically catch Pacific cod can continue to operate without fear that those fisheries will be closed due to overfishing concerns of Pacific cod. If topping off were not allowed for some species, then it is more likely TACs would not be fully harvested for species with TACs too low to support a directed fishery. NMFS has used the MRAs as a tool for management in this manner with success for many decades.

Although a directed fishing closure will slow the rate of targeted and retained catch of species closed to directed fishing through the MRAs, a directed fishing closure will not necessarily slow the intrinsic rate of encounters with that species while directed fishing for a different species. Discarded catch also accrues towards the TACs and MRAs do not control discarding. If a TAC is projected to be exceeded after NMFS has issued a directed fishery closure, NMFS may place the species on prohibited species catch (PSC) status which effectively sets the MRA to zero and removes any incentive for a vessel to catch that species, thus discouraging topping off behavior. However, PSC status does not prevent catching and discarding of the species; it only prohibits retention. NMFS has additional tools to avoid overfishing of any species, including closing other directed fisheries that are catching a species of concern.

Ultimately, the MRA system supports flexible, responsive, and sustainable management. It provides vessels the opportunity to maximize utilization of harvested fish, minimize unnecessary discards, and continue operating even after key species have been closed to directed fishing. As fisheries management continues to evolve, MRAs remain one of the most critical instruments for regulating retention behavior, slowing the harvest of vulnerable species, and ensuring that TAC limits are respected across diverse and dynamic fisheries in the North Pacific.

There are a few situations that require mandatory retention of some species either up to the MRA amount or require full retention, 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 FMP species caught by non-AFA listed 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 PSC status. Since the calculation of MRAs are based on overall retention, it 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 Office of Law Enforcement (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 CV fishes in an area closed to directed fishing, the MRA regulations prohibit retention of that species beyond the MRA for the entire trip. Because the MRA regulations have now prohibited exceeding the MRA for the entire trip, 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 anything over the MRA amount because directed fishing is now closed everywhere to that CV.

In addition, full retention of halibut and sablefish is required by CVs 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 (HAL), pot, and jig gear in the BSAI and GOA (§ 679.7(a)(5)), even if the rockfish species is on PSC. Full retention of most species is required for trawl vessels participating in the electronic monitoring (EM) program while harvesting BS, AI, or GOA pollock.

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 can be very imprecise and hard for vessel operators to quantify, especially for vessels that do not have scales onboard. For some non-target species, this is also hard to monitor and enforce on CVs with catch being stored in refrigerated seawater tanks and not accessible to crew or boarding agents. Vessels, worried about exceeding instantaneous MRA amounts early in a trip, will discard species that may have otherwise been retained. If the species has value, the same vessel may also target that species and retain it later in their trip, resulting in more overall catch (retained plus discarded catch). As a result, current MRA regulations can lead to increased discards and waste, and may not be an effective tool to limit overall catch.

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 BSAI pollock and BS Atka mackerel. In addition, MRAs for C/Ps fishing under a rockfish cooperative fishing quota permit in the CGOA 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.

Appendix 1 provides a detailed description of the evolution and development of MRA regulations. Appendix 1a provides a timeline of pertinent actions regarding MRAs. However, many MRA changes occurred in conjunction with other regulatory packages and may not be listed. Of the history of MRA changes in regulatory packages that are listed in the timeline in Appendix 1a, three are associated with changing an MRA calculation interval from instantaneous to offload, similar to the proposed Alternative 4 in this action. In addition, 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. Information on each of these items are provided in detail within Appendix 1b.

Under the status quo, there have been instances where a vessel returned to port prematurely due to unforeseen circumstances, such as an onboard medical emergency or mechanical issue. If a vessel retaining incidental species, whose MRA is assessed at offload, has to end its fishing trip early, and decides to offload, the vessel may be over the MRA for one or more species if it has not accumulated enough basis species. This scenario currently applies only to non-AFA vessels with BSAI pollock and BS Atka mackerel whose MRA is calculated at the end of each offload and C/Ps participating in the Rockfish Program in the CGOA whose MRA is normally calculated at the end of a weekly reporting period. For other vessels, MRAs apply at any time and to all areas for the duration of the fishing trip; therefore, at no point in time would it be allowable for these vessels to be over the MRA, including if a medical emergency, a mechanical emergency, or poor weather causes them to return to port.

BSAI pollock and BS Atka mackerel MRAs for non-AFA vessels are calculated at the end of each offload. If such a vessel comes to port due to a medical emergency or mechanical issue but does not offload, then the vessel would not be subject to an MRA calculation. However, if that same vessel returns to port and offloads some, or all, of the fish or fish product, then it would be subject to an MRA calculation and possible overage. In other words, if the vessel was unable to fish for basis species for as long as it had originally anticipated due to the unforeseen interruption of its trip, the vessel might be over its MRA for BSAI pollock and BS Atka mackerel upon offload. This would be considered a violation under current regulation.

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. Options 1 through 6 were brought forward by NMFS and would provide clarification and make minor modifications to the MRA regulations without changing current practice. A summary of the NMFS proposed changes under Options 1 through 6, along with the corresponding regulatory citation, is provided in Table 2-1. Option 7 would modify how directed fishing would be defined for vessels participating in the pelagic trawl EM program and was incorporated from a separate Council motion into the current motion at the April 2025 meeting (see Section 1.2 for more detail).

Option 1: Modify the definition of a fishing trip to make it clear that motherships are responsible for the overall MRA of any unsorted codends from a CV that a mothership accept delivery of.

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. 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 and non-pelagic trawl), 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.

Unsorted codends remove the ability for a CV to sort catch to remain under the MRA, therefore it is the mothership's responsibility to ensure compliance with the MRA regulations. 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. CVs using other gear types do not pass unsorted catch to motherships. A CV is fishing with pot gear, brings the pot onboard and then sorts and discards the catch before transferring 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.

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 OA fishery, a C/P may be participating in both A80 and a Community Development Quota (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 (full tables available in Appendix 2). 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 criterion that would end a fishing trip nor is it currently mentioned in the application regulations for MRAs. 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 A80, PCTC, CDQ, IFQ, AFA, AI 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 A80 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.

C/Ps also acting as Motherships

Many 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.

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. 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 A80 allocated species. Although these offload MRA regulations already exist, several aspects of these regulations need clarification.

The current MRA regulations at § 679.20(e)(3) 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, § 679.20(e)(3) 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 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 A80 species BSAI pollock and BS Atka mackerel MRAs are calculated at the time of the offload and any species open to directed fishing may be used as a basis species for compliance with MRAs.

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 A80 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 A80 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 A80 species should be able to do the same. Therefore, under Option 4, the regulations would be modified to clarify when a CDQ group uses an AFA vessel to harvest A80 species, the BSAI pollock and the BS Atka mackerel MRA will be calculated at the time of offload.

Directed fishing calculations and determinations need to be updated for 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 Act[8], 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. 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.

Option 5: Clarify that MRAs take precedence over IR/IU regulations for CVs delivering catch to a shoreside processor or stationary floating processor when CVs 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 that 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.

8 Section 305(i)(1)(B)(iv) of the Magnuson-Stevens Act 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."

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% 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 CVs to give precedence to the MRA regulations over IR/IU. This can result in increased regulatory discard. In the example listed above, the CV would be required to discard any Pacific cod 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 CVs fish in areas with different fishing prohibitions.

Option 6: Update IR/IU regulations for A80 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[9] to part 679 (FMP groundfish) as IR/IU species for A80 C/Ps. Under this regulation, A80 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, A80 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, A80 cooperatives stated their intent to maintain groundfish retention rates similar to GRS and are required to submit an annual A80 cooperative report to NMFS which includes information on the percent of groundfish retained for each cooperative (§ 679.5(s)(6)). A80 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 A80 participants are subject to a 15% 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 A80 C/Ps. To address this issue, the § 679.27(b)(4)[10] regulations would be updated under this option to make clear the intended utilization of 15%, and remove the full retention requirement of some FMP groundfish species for A80 C/Ps.

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

10 Available at https://www.ecfr.gov/current/title-50/part-679#p-679.27(b)(4)

Table 2-1 Summary of Alternative 2, Options 1 through 6 and corresponding regulatory sections.

Regulatory Section	Option	Sector	Issue	Revise Regulation to:
Fishing Trip Definition for MRAs (§679.2 *Fishing trip*)	1	Mothership	Unsorted codends - CV delivering to motherships	MRA calculated by mothership for CV delivering unsorted codends (also in application regulation)
		CV	Unsorted codends - CV delivering to motherships	Exclude CV delivering unsorted codends to mothership (also in application regulation)
Calculation of MRAs (§ 679.20(e)(2))	2	All	MRA by Management program	MRA calculated by management program
		C/P also acting as mothership	MRA by Management program	MRA combined for same management program for C/P and mothership
	4	CDQ	CDQ	Clarify current CDQ groups MRA calculation
Application of MRAs (§ 679.20(e)(3))	1	Mothership	Unsorted codends - CV delivering to motherships	MRA applies to mothership for CV delivering unsorted codends (also in fishing trip regulation)
		CV	Unsorted codends - CV delivering to motherships	Exclude CV delivering unsorted codends to mothership (also in fishing trip regulation)
	3	C/P / Mothership	Offload regulation - incorrect citation for AFA vessels for BSAI pollock and BS Atka mackerel MRA	Correct citation in application of MRA regulations
			Offload regulation - AFA replacement vessel not included for BSAI pollock and BS Atka mackerel	Revise regulation for AFA replacement vessels for MRAs and BSAI pollock and BS Atka mackerel at offload
	4	CDQ	CDQ	CDQ may use any species open to directed fishing as a basis species
IR/IU (§ 679.27)	5	All	MRA or IR/IU precedence	MRA takes precedence over IR/IU
	6	A80	All groundfish are IR/IU species	Clarify if all species need to be retained and a product made (i.e., sharks)

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 **Suboptions:** 51-90 percent or greater of total catch.

Under Option 7, the percentage of total catch would be calculated including all catch from the time harvesting begins until catch is transferred off the vessel (*e.g.,* offload-to-offload). Option 7 seeks to address a conflict between the regulatory definition of directed fishing and regulations implemented for the trawl EM category (89 FR 60796, July 29, 2024). The trawl EM category was implemented in 2025 and is a voluntary program for CVs targeting pollock using pelagic trawls in the BSAI and 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), POP and squid are a common incidental catch species, particularly in the CGOA, that can be difficult to distinguish on sonar. 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. Between January 2021 and December 2024, a total of 1,556 trawl EM deliveries were landed in the CGOA. Of those 1,556 deliveries, 54% had POP of any quantity in the harvest, and 9.8% of deliveries exceeded the aggregated rockfish MRA. 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.

Fishery participants 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 is it expected to drive additional harvest of POP by vessels that are targeting pollock.

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. 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 CVs harvesting pollock that are not in the trawl EM category, that 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 Option 7 seeks to modify the regulatory definition of "directed fishing" so that a vessel participating in the trawl EM category is considered directed fishing for pollock (and no other species) when between 51% and 90% of delivered harvest is pollock. This approach resolves the regulatory conflict and ensures consistency with the full retention requirement for trawl EM vessels. The Council must choose the appropriate percentage between 51% and 90%.

When the Council discussed this option in April 2025, the Council specifically requested that analysts evaluate a broader range of possible thresholds between 51% and 90%. Table 2-2 examines this range using data from 2022 through 2024 which are the years of trawl EM deployment in the fishery. These data showed that an 80% threshold would capture more than 96% of all EM trips in every year while still providing a clear ceiling that discourages vessels from altering behavior in ways inconsistent with the intent of MRA regulations. The table also demonstrated that nearly all trips were dominated by pollock even at the 50% level, with 100% of trips above that mark in 2022, 99.6% in 2023, and 99.9% in 2024. Only a handful of trips fell below 50%, and those cases were driven by unusual circumstances where non-pollock catch was unusually high, such as localized POP bycatch events, mechanical issues that prevented additional fishing, or fishing in areas with atypical catch composition.

For these reasons, in the June 2024 Council motion, the 80% threshold was presented in Alternative 3 as a practical midpoint after NMFS looked at a range of options. It provides a level of certainty that pollock remains the clear basis species for trawl EM trips while avoiding an overly strict standard that could penalize vessels for occasional, unintentional catch variability. Eighty percent reflects both the consistency of historical activity shown in Table 2-2 and the need to maintain a cap that prevents vessels from relying too heavily on incidental catch to define trip composition. In addition, trawl EM vessels in the GOA are subject to incentive plan agreements that further limit the potential for vessels to profit from incidental species and require compliance with area closures and directed fishing prohibitions. Taken together, the 80% threshold and these existing incentive plans provide a layered framework that balances operational realities with the Council's goal of preventing changes in fishing behavior while ensuring consistency with the original intent of MRA regulations.

The data indicates the Council could select 51%; the lowest part of the range analyzed. This lower range could further avoid the conflicting requirements. As indicated by Table 2-2 the difference between 51% and 80% would capture an additional 4 percent of trips. The required trawl EM incentive plans may provide further disincentives from exceeding MRAs should the Council choose a percentage lower than 80%. However, any selection under 80% may still provide more opportunity for vessels to change behavior and top off.

Table 2-2 Percentages of POP and pollock by year for the trawl EM GOA vessels for 2022 - 2024.

Trawl EM GOA Vessels	2022	2023	2024
Total Trips	675	660	1022
Trips with > 80% Pollock	662	638	1015
Percentage of Trips >80% Pollock	98.07%	96.67%	99.32%
Trips with > 50% Pollock	675	657	1021
Percentage of Trips >50% Pollock	100%	99.55%	99.90%

As indicated by Table 2-2, between ~0.7% and 1.97% of trips between 2022 and 2024 resulted in pollock being less than 80% of the total catch. As such, 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.

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 for C/Ps and motherships (not including current offload-to-offload species - BSAI pollock, BS Atka mackerel, and weekly reporting period species in the CGOA Rockfish Program). Five trip triggers are currently specified in paragraph (1)(i)(A) through (E) of the definition of fishing trip at § 697.2. Under Alternative 3, two triggers would remain: paragraph (B) the offload or transfer of all fish or fish product from that vessel; and paragraph (D) if the vessel begins fishing with a different type of authorized fishing gear. Whichever of these two events comes first would trigger a new trip calculation for the purpose of MRAs. 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. 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. In addition, there is a brief discussion in the Executive Summary highlighted as Specific Items for Council Attention regarding the application of the gear trip trigger, and basing the offload trigger on the offload of all fish versus any fish.

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 that 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 was offloaded. **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.**[11] For the purposes of this section the analysts assume this regulation would no longer be in effect. The effects of this regulation, should it remain in place in conjunction with Alternative 3, is described in the Executive Summary under the title Specific Items for Council Attention. 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.

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 species closed to directed fishing. Early in the trip, the MRA for these valuable 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 a species that exceeds the MRA for the basis species currently on board, the portion of that species exceeding the MRA must be discarded, known as a regulatory discard. Many of these species are valuable, and would not otherwise be discarded if regulation did not mandate the discard. For valuable species closed to directed fishing, 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 these species if they 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 species.

2.3.1 Method 1 and Method 2 under Alternative 3

The Council identified two methods for calculating MRAs under Alternative 3:

> **Method 1:** Use all basis species accumulated on the vessel when calculating MRAs for each trip regardless of fishery closures and protection areas.
> **Method 2:** Only use basis species accumulated after a change in directed fishing has occurred due to an inseason action or entering a protection area for the species that had a change in status for each trip.

Alternative 3, Method 1 would include all basis species onboard at that given moment regardless of fishing location or a change in fishing prohibition to calculate the MRA. For example, a C/P trawl vessel is fishing in an area that is open to directed fishing for Pacific cod and has 1,000 mt of basis species (other than Pacific cod) onboard. That vessel then moves into an area where Pacific cod is closed to directed fishing. Using Method 1, the vessel could use all the basis species harvested outside that area as a basis species for Pacific cod inside that area and retain 200 mt of Pacific cod. Because the MRA is still instantaneous under Alternative 3, the vessel would have to discard any Pacific cod over the MRA based on basis species from any area currently onboard. If a species closes to directed fishing mid trip, the vessel could also use basis species accumulated before the closure to retain more of that species after the closure.

Method 2 would limit the amount of species that could be retained inside closed areas and the amount of retention that could occur when a species open to directed fishing is closed to directed fishing mid trip.

11 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."*

Under Alternative 3, Method 2 would only include basis species accumulated when entering an area with a different fishing prohibition or after a change to directed fishing occurs. Using the same example as above, a C/P trawl vessel is fishing in an area that is open to directed fishing for Pacific cod and has 1,000 mt of basis species onboard. The vessel then moves to an area closed to directed fishing for Pacific cod. Using Method 2, the vessel would not be allowed to use the basis species caught outside the area. Instead, only basis species accumulated inside the area could be used as a basis species when calculating MRAs. In this scenario, the vessel would be required to discard all Pacific cod harvested until enough basis species could be accumulated onboard. Similarly, if a species is closed to directed fishing mid trip, the vessel could not use any basis species from before the species closed to directed fishing to retain more of that species.

Method 2 would not result in diminished discards from the status quo when entering an area closed to directed fishing or if there is a change in a fishing prohibition mid trip. However, Method 2 may mitigate any concerns over fishing in SSL protection areas or potential incidental catch allowance (ICA) increases. One option for Method 2 is to only limit the species that is closed to directed fishing to an MRA calculation that only uses newly accumulated basis species, while continuing to let all other MRA species accrue against all basis species onboard from both before and after the closure. This would reduce regulatory discards of all species except the species closed to directed fishing, but would add increased complexity to the MRA calculations.

Note: The descriptions of Method 1 and Method 2 under Alternative 3 are based on current assumptions about the implementation of this specific alternative. If the Council selects other alternatives in combination with Alternative 3, as indicated in the April 2025 Council motion that Alternatives 2 through 6 may be selected together, this may change how these methods work. These issues are further discussed in Section 2.7.

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

This alternative would add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors.

> **Option 1:** Add BSAI Pacific cod, GOA Pacific cod, GOA pollock, BS skates, CGOA Rockfish Program, and GOA shallow-water flatfish
> **Option 2:** Include all groundfish species.

The Council identified the two methods for calculating MRAs that would only apply to C/Ps and motherships. These methods are the same as the methods considered under Alternative 3.

> **Method 1:** Use all basis species accumulated on the vessel when calculating MRAs for each trip regardless of fishery closures and protection areas.
> **Method 2:** Only use basis species accumulated after a change in directed fishing has occurred due to an inseason action or entering a protection area for the species that had a change in status for each trip.

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 constraining for operators at the beginning of a fishing trip when vessels do not have significant amounts of the basis species on board to retain catch of valuable species that are closed to directed fishing. If a vessel catches a percentage of a species closed to directed fishing that exceeds the MRA for the basis species currently on board, the portion of the that species exceeding the MRA must be discarded, which is called regulatory discards.

Many of these 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. The purpose of this alternative is to reduce regulatory discards by calculating retention of MRA species at the time of offload while at the same time does not increase the retention of MRA species above the MRA. **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.**[12] For the purposes of this section the analysts assume this regulation would no longer be in effect. The effects of this regulation, should it remain in place in conjunction with Alternative 4, is described in the Executive Summary under the title Specific Items for Council Attention.

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 BSAI pollock and BS Atka mackerel. In addition, MRAs for C/Ps fishing under a CGOA rockfish cooperative fishing quota (CQ) permit in the CGOA 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, it is unclear how partial deliveries or deliveries to multiple processors should be treated when calculating MRAs. Under 50 CFR 679.2, a fishing trip for all vessels is defined as beginning when groundfish harvest starts and ending when *all* fish or fish products are offloaded or transferred from the vessel. A vessel that delivers sequentially to multiple processors, cargo vessels or shoreside storage sites without fully offloading in between, the MRA would be calculated based on the combined basis and retained species across those cumulative offloads. This is intentional to link harvest from all offloads into one trip. However, this could be interpreted such that if a vessel offloads part of its catch and returns to fishing grounds with fish still onboard, the fishing trip has not ended. This is rare for CVs, but common for C/P and motherships. **Additional clarification in regulations may be necessary to ensure consistent application across sectors and to address operational patterns where partial offloads are common**. There is a brief discussion in the Executive Summary highlighted as Specific Items for Council Attention regarding basing the offload trigger on the offload of *all* fish versus *any* fish.

2.4.1 Option 1 - Apply BSAI Pacific Cod, GOA Pacific Cod, GOA Pollock, BS Skates, CGOA 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). 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 2-3 and Table 2-4provide 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-

12 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."*

2024) at a sector level, the full retention requirement for BSAI Pacific cod, except in the case of regulatory discards above the 20% MRA retention rates, has resulted in extremely high retention rates as reflected in Table 3-1 through Table 3-6 and in Table 2-3, which shows an average retention of ranging between 89% for AFA C/Ps and 99.9% for the pot sector during 2020 through 2024. The MRA for BSAI Pacific cod as incidental catch species is 20% for all basis species.

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 2-4 and Table 3-19). However, since A80 is allocated 13.4 % 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 A80 fisheries is not restricted by MRAs unless fishing inside an SSL protection area or the BS or AI subarea is closed to directed Pacific cod fishing for all sectors. 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 2-4 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% retention rates but have very little incidental catch.

Table 2-3 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 2-4 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

Presently, GOA Pacific cod stock is exploited by a multiple-gear fishery, including trawl, longline, and pot sectors. Table 3-1 through Table 3-6, and Table 2-5 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 2-5 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 2-6, 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% with the exception of the A80 sector which had an average retention rate of 41% (Table 2-6). The MRA for GOA Pacific cod as incidental catch species is 20% for nearly all basis species.

Table 2-5 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 % of 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 2-6 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 3-1 through Table 3-6 along with Table 2-7 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. 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 2-8, 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% for HAL CV sector, which had an average total catch of 11 mt, to a high of 99% for trawl CV sector. (Table 2-7).

Table 2-7 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 2-8 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

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 skates are managed as an 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% for most basis species, but is 3% for arrowtooth flounder and Kamchatka flounder. Table 3-1 through Table 3-6 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% of the average total catch during this

period. The only other sector with greater than 5% 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% of the total.

Retention of BSAI skates is low as reflected in Table 2-9. Information in the table shows that A80, AFA C/P, HAL C/P, and trawl CV sectors on average retained either less than 50% or slightly above 50% of their average total catch of skates. As noted in Table 2-10, 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% MRA while targeting BSAI Pacific cod and yellowfin sole under an instantaneous calculation period.

Table 2-9 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 % ot 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 2-10 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 bilineat*a). Table 3-1 through Table 3-6 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 2-11). As noted in Table 2-11, the fixed gear sectors caught less than 1% of the combined 2020 through 2024 average total catch. The average retention of shallow-water flatfish was less than 1% for fixed gear sectors, 71% for the trawl CV sector, and 87% for the A80 sector from 2020 through 2024 (Table 2-11).

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.

Table 2-11 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 2-12 Average incidental catch (mt) by target fisheries and sectors for GOA shallow-water flatfish, 2020 through 2024

	Target fisheries									
Sectors	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)

CGOA Rockfish Program

The CGOA 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, POP, 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 CGOA 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 CGOA, 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 CGOA Rockfish Program operate under an instantaneous MRA calculation period. Under Alternative 4, both C/Ps and CVs fishing under a rockfish CQ permit in the CGOA, MRAs would instead be calculated from offload-to-offload period.

Table 2-13 provides the 2020 through 2023 CGOA Rockfish Program average first wholesale value and average ex-vessel price as well as average discarded, retained, retained catch as a percent of total catch, and total catch from 2020 through 2024. Table 2-14 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 2-14).

Table 2-13 CGOA Rockfish Program average first wholesale value ($) from 2020 through 2023, average ex-vessel price ($) 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 2-14 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 2-15 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)

2.4.2 Option 2 - Include all groundfish species

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 Alternatives 1's 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 that 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 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 HAL C/P remains at sea for three weeks fishing OA 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.

Under Alternative 1, 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 and fish stored in refrigerated seawater tanks are inaccessible to at-sea enforcement. Therefore, it can be difficult to determine and enforce if a CV is within the allowed MRA for species closed to directed fishing at any given moment of the fishing trip, though most overages of species targeted for topping off are less nuanced and readily identifiable at-sea using estimates recorded in logbooks. Further, under Alternative 4 Option 2, 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.).

2.4.3 Method 1 and Method 2 under Alternative 4

There are two different methods that may be used to calculate the basis species for purposes of MRAs. Under Alternative 4, Method 1 would include all basis species accumulated on board by the time of the offload regardless of fishing location or a change in fishing prohibition to calculate the MRA. For example, a C/P trawl vessel is fishing in an area that is open to directed fishing for Pacific cod and has 1,000 mt of basis species (other than Pacific cod) onboard. That vessel then moves into an area where Pacific cod is closed to directed fishing. Using Method 1, the vessel could use all the basis species harvested outside that area as a basis species for Pacific cod plus any projected future basis species they may accumulate from any area before the offload. Because the MRA is not instantaneous under Alternative 4, the vessel could continue to retain Pacific cod even if there is not enough basis species onboard, as long as enough basis species has been accumulated by the time of offload. If a species closes to directed fishing mid trip, the vessel could also use basis species accumulated before the closure to retain more of that species after the closure. This method paired with Alternative 4 would likely result in the least amount of discarding but increase topping off opportunity of SSL prey species inside SSL protection areas or after a species has closed to directed fishing.

Method 2 would limit the amount of SSL prey species that could be retained inside SSL areas and the amount of retention that could occur when a species open to directed fishing is closed to directed fishing mid trip. Under Alternative 4, Method 2 would only include basis species accumulated when entering an area with a different fishing prohibition or after a change to directed fishing occurs. Using the same

example as above, a C/P trawl vessel is fishing in an area that is open to directed fishing for Pacific cod and has 1,000 mt of basis species onboard. The vessel then moves to an area closed to directed fishing for Pacific cod. Using Method 2, the vessel would not be allowed to use the basis species caught outside the area. Instead, only basis species accumulated inside the area could be used as a basis species when calculating MRAs. In this scenario, the vessel could still retain Pacific cod using the projected amount of basis species to be retained within that area by the time of the offload. Similarly, if a species is closed to directed fishing mid trip, the vessel could not use any basis species from before the species closed to directed fishing to retain more of that species.

In this case, Method 2 would likely result in a small decrease in discards from the status quo due to the ability to retain groundfish based on the amount of projected basis species from the area instead of having an instantaneous MRA. Although Method 1 would likely result in the least amount of discarding, Method 2 may mitigate any concerns over SSL protection areas or potential ICA increases. One option for Method 2 is to only limit the species that is closed to directed fishing to an MRA calculation that only uses newly accumulated basis species, while continuing to let all other MRA species accrue against all basis species onboard from both before and after the closure. This would reduce regulatory discards of all species except the species closed to directed fishing but would increase the complexity of MRA calculations. These issues are further discussed Section 6.4.4.

2.5 Alternative 5 – Annual BS pollock MRA calculation for Amendment 80

This alternative would apply BS pollock MRA provisions to A80 vessels on an annual basis with the implementation of an incentive plan or other controls to prevent increases in average pollock catch. It also would establish similar measures for CDQ groups harvesting A80 species to ensure consistency with regulation of harvest statutory requirements.

A shift to an annual MRA accounting system for pollock presents several potential benefits for the A80 sector. The current trip-based system under Alternative 1, with its five complex triggers for C/Ps, constrains vessels to manage their pollock bycatch on a short-term, tactical basis. Annual accounting would provide greater operational flexibility, allowing an operator to balance a trip with higher pollock bycatch against subsequent, cleaner trips over the course of the entire fishing year. This would enable more strategic, long-term planning and allows vessels to operate more efficiently and utilize more pollock catch in the multi-species flatfish fisheries.

A primary benefit of this flexibility is a reduction of regulatory discards. From a resource perspective, a dead fish is a dead fish regardless of whether it is retained or discarded. Under current rules, a vessel that exceeds its pollock MRA early in a trip may be required to discard marketable fish. By allowing bycatch to be balanced over a year through annual accounting, it could permit the retention and utilization of this fish, supporting waste reduction goals of this action. The A80 fleet tends to encounter more pollock in the A season than the B season. Allowing more pollock to be retained earlier in the year would prevent discarding in the A season which could then be balanced out in the B season when pollock is not encountered as often. Furthermore, this approach would simplify the regulatory framework by replacing the need to track compliance across numerous, narrowly defined "trips" with a single, definitive year-end calculation, reducing the administrative burden on the A80 fleet.

However, under an annual pollock MRA calculation, A80 vessels may put themselves at risk of being over the yearly MRA or not complying with IR/IU regulations if the vessel experiences an unexpected mechanical issue that prevents it from fishing for the entire year. For example, if a vessel is planning on fishing from January until November, the vessel may retain all of its pollock at the beginning of the year with the expectation that it would accumulate more basis species later in the year when pollock is not encountered as frequently. If the vessel has a major mechanical issue in June, for example, and is unable

to fish for the remainder of the year, then that vessel will likely end up over the yearly MRA of pollock. In addition, if a vessel should discard pollock at the beginning of the year it could be in violation of the IR/IU regulations, which prohibit discarding of pollock until the MRA is reached. It might be difficult for vessels to predict when the MRA is reached to stay in compliance with the IR/IU regulations under a yearly MRA calculation.

While an annual accounting period is mostly advantageous due to reduced discards, an annual accounting system for pollock also introduces a risk to the allocation structure of the pollock fishery. The core issue is that the flexibility of an annual MRA may incentivize the A80 fleet to increase its overall harvest of pollock. The A80 sector cannot avoid all pollock however, as shown in Tables 2-3 and 2-4 of the A80 Program Review completed in 2025[13]; the amount the fleets catch is consistent over the past 10 years. By providing an annual accounting period, the regulation may incentivize more pollock catch. If that occurs, this would lead to an increase in the sector's total retained harvest of pollock compared to the current method, where trip-by-trip avoidance behavior may have kept the total annual bycatch below the theoretical maximum. This may also provide an avenue for increased catch within SSL protections areas or topping off behavior, which may otherwise have been tempered by trip-by-trip accounting.

An increase in the A80 fleet's pollock harvest would directly impact the AFA pollock fishery. The pollock TAC is apportioned between a Directed Fishing Allowance (DFA), which is allocated to the AFA fleets, and an ICA, which is set aside to account for bycatch in all other fisheries. A consistent increase in the retained pollock harvest by the A80 fleet would necessitate an increase in the pollock ICA during the annual harvest specifications process. A larger ICA reserved for the A80 sector would, by necessity, reduce the amount of pollock available for the DFA, directly decreasing the harvest opportunity for the AFA fleets. This represents a direct, negative allocative impact on the primary user group.

Consultation with industry representatives have indicated that a substantial increase in pollock harvest under Alternative 5 is unlikely, citing several reasons:

- A80 vessels are built and designed specifically for non-pollock fisheries. Their markets, gear configurations, and operational plans are aligned with flatfish and other A80 species.
- While pollock is frequently encountered, targeting pollock would reduce opportunities to retain more valuable target catch. The goal is to retain pollock more efficiently, not to replace target species.
- Even with a 20% MRA, some vessels would still discard pollock because incidental catch can exceed this threshold.
- Annual accounting would allow greater flexibility to reduce discards and improve compliance with MRAs.
- ICA use can be reviewed annually through the harvest specifications process. Any trends toward increased pollock retention would be detectable through routine Council review.
- If needed, the AFA and A80 sectors have a history of working collaboratively and could develop non-regulatory agreements to minimize allocation conflicts.

To address any potential risk, the alternative suggests the development of a mandatory incentive plan, or other controls designed specifically to provide the necessary controls to prevent such an increase in the overall harvest.

If the Council believes the potential risk warrants a prescriptive solution, it could recommend that this alternative include an incentive plan requirement similar to already established incentive plans. This would likely include regulations to implement an approvable incentive plan for the A80 sector to contain

13 Available at https://www.npfmc.org/allocation-and-program-review/

several specific and enforceable components. First, the plan could establish a fixed, tonnage-based annual cap on pollock bycatch for the entire cooperative, based on historical bycatch levels, to provide a clear and unambiguous performance metric. Second, the plan should be a binding agreement at the cooperative level, making the entire A80 sector accountable for staying under the cap and specifying clear consequences for an overage. Third, the plan could mandate the implementation of a data-sharing and bycatch avoidance program, requiring near real-time reporting of encounter rates from all member vessels to facilitate fleet-wide avoidance of high-pollock areas. Fourth, to prevent temporal concentration of pollock catch, the plan could include in-season controls, such as seasonal apportionments of the annual cap.

The Council could alternatively recommend other controls or approaches to achieve this goal. For example, annual inseason management reports and A80 cooperative reports already provide detailed information on sector-level catch and retention. These tools could be used to monitor pollock catch levels and assess whether behavior changes after the implementation of an annual MRA. If there is evidence of increased harvest, the Council could respond through future management action. Removing the requirement for an incentive plan would reduce regulatory complexity and may be appropriate if the potential risk does not warrant a prescriptive solution.

The proposal to shift to an annual pollock MRA for the A80 sector therefore presents a trade-off, but one where the risks may be effectively monitored and managed through existing processes. The viability of this alternative does not rely solely on a formal incentive plan but could be supported through Council oversight and ongoing data reporting. This proposal is limited in scope to the A80 sector and provides a test case for annual accounting within a structured cooperative environment. If successful, it could serve as a model for similar efforts in other fisheries facing challenges with bycatch retention and compliance complexity.

2.6 Alternative 6 – Exemptions to MRAs for emergencies

This alternative would revise the regulations to provide an exemption from MRA requirements in cases of medical or mechanical emergencies, or poor weather, that end a fishing trip earlier than planned.

This would provide an exception to the MRA requirements in certain situations when a vessel returns to port prematurely due to unforeseen or unavoidable circumstances and offloads fish or fish product. An exemption to MRA requirements would not be needed if a vessel returns to fishing without offloading fish or fish product.

In developing regulations to implement this alternative NMFS would need to consider:

- Clear parameters on what constitutes a: 1) medical emergency, 2) a mechanical emergency, and 3) poor weather.
- Should an offload made for the returning vessel's convenience while in port, but not required by the emergency, should be treated the same as an offload required by the emergency.
- What amount over an MRA would be acceptable?

There are examples of exemptions for emergencies in other NMFS Regions. Salient features include requirements for the vessel owner or operator to report the emergency to NMFS within a designated timeframe and provide records to substantiate the claim. Identification of the NMFS official with authority to grant the requested exemption is also a common feature. For example, in the West Coast, a Vessel Monitoring System (VMS) regulation requires initial contact with OLE within 24 hours and the submission of a written exemption request within 72 hours. *See* 50 CFR § 660.14. Numerous regulations applicable to Federally managed fisheries off Alaska rely on the Regional Administrator to make

determinations regarding fishery management decision. **Under Alternative 6 NMFS would draft regulations specifying criteria for the Regional Administrator to use in determining when an emergency exists for 1) medical reason; 2) mechanical reasons; and 3) poor weather. The Regional Administrator would notify NOAA OLE of exemptions approved.**

A vessel operator would be required to notify NMFS that an emergency occurred and NMFS would need to be able to verify that the emergency meets the criteria for an MRA exemption. NMFS would need to be able to determine that all requests for an exception are for valid reasons to prevent abuse of this provision. As noted during the March 2025 Enforcement Committee discussion, USCG Form CG-2692 could be used as a standard means of confirming an emergency occurred. OLE consulted with the USCG 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. The purpose of this form is for the USCG to gather facts to determine causes surrounding reportable marine casualties. This information assists in promoting safety of life, property, and the protection of the marine environment through preventing the reoccurrence of accidents.

Vessels could choose to share their Form CG-2692 if they completed one, or submit information to NMFS separately. If this exemption is intended to apply in situations that do not rise to the same level that requires the incident be reported on this form, then this form may not be an appropriate verification mechanism. In other words, if the Council intends to define different emergency circumstances, other than those that require the submission of this form, then the use of this form would only be useful in verifying some situations, though potentially not all.

USCG Form CG-2692 is submitted for specific reasons as specified at 46 CFR 4.05-1(a). These reasons include:

(1) An unintended grounding, or an unintended strike of (allision with) a bridge;
(2) An intended grounding, or an intended strike of a bridge, that creates a hazard to navigation, the environment, or the safety of a vessel, or that meets any criterion of paragraphs (a) (3) through (8);
(3) A loss of main propulsion, primary steering, or any associated component or control system that reduces the maneuverability of the vessel;
(4) An occurrence materially and adversely affecting the vessel's seaworthiness or fitness for service or route, including but not limited to fire, flooding, or failure of or damage to fixed fire-extinguishing systems, lifesaving equipment, auxiliary power-generating equipment, or bilge-pumping systems;
(5) A loss of life;
(6) An injury that requires professional medical treatment (treatment beyond first aid) and, if the person is engaged or employed on board a vessel in commercial service, that renders the individual unfit to perform his or her routine duties; or
(7) An occurrence causing property-damage in excess of $75,000, this damage including the cost of labor and material to restore the property to its condition before the occurrence, but not including the cost of salvage, cleaning, gas-freeing, drydocking, or demurrage.
(8) An occurrence involving significant harm to the environment as defined in § 4.03-65.

Medical Emergency

Unless further direction is provided by the Council, NMFS would rely on the USCG language related to a medical emergency or injury that must be reported as a marine casualty, this would include a loss of life; or an injury that requires professional medical treatment (treatment beyond first aid) and, if the person is engaged or employed on board a vessel in commercial service, that renders the individual unfit to perform his or her routine duties. This would not include situations where a vessel might unexpectedly return to port due to the injury or death of a loved one or a person who is not onboard the vessel.

Mechanical Emergency

Unless further direction is provided by the Council, NMFS would rely on the USCG language for a marine casualty to define a mechanical emergency. This would include the reasons stated at 46 CFR 4.05-1(a)(1) through (4) and (7) as stated above.

Poor Weather

An exemption from MRA requirements for trips ended because of poor weather would present a challenge to precisely define what constitutes "poor weather" in the Alaska marine environment. A standard that is too broad might encourage an operator to make a subjective claim of poor weather whenever it would make business sense to do so. On the other hand, a specific, measurable, and verifiable standard could encourage accountability and aid enforcement. The seabird avoidance gear regulation provides an example of a weather exemption based on a measurable standard of wind speed. *See* 50 C.F.R. § 679.24(e)(4)(i) ("In winds exceeding 45 knots (storm or Beaufort 9 conditions), the use of a buoy bag line is discretionary."); *See also Id.* § 679.24(e)(4)(ii)(B), (e)(4)(iv)(B), (e)(4)(v). OLE notes that verifying weather conditions at sea can present challenges. Another concern is that a uniform weather threshold could have disparate impacts on the different fleets, which vary greatly in size and design. For example, large C/Ps often choose to fish during very rough weather while the same weather system would prevent smaller CVs from fishing. In addition, the comfort levels of captains and crews in fishing through weather is highly variable and dependent on experience and vessel size.

As a principle of maritime law, the doctrine of good seamanship requires prudent trip planning and consideration of weather conditions by a vessel operator. Adverse weather is a constant consideration for vessels operating in the Federally managed fisheries off Alaska and has always been a consideration for vessel operators and those operators therefore make their own subjective decisions in the case of inclement weather based on the sea state, operator experience, and vessel size, among many other factors. Additional challenges with this portion of Alternative 6 are further discussed in Section 4.5, **NMFS requests the Council provide clarify on how to determine what constitutes "poor weather" that should result in an exemption from MRA regulations vs. common poor weather routinely dealt with by all fishery participants.**

2.7 Alternative Tradeoffs

Alternatives 2-6 for this action are non-exclusive, which means the Council may choose one or multiple alternatives for final action. The combination of alternatives the Council chooses might have some interplay between one another. It is important that this interplay is understood as much as possible. In particular, Alternatives 2, 3, and 4 may interact with one another if chosen for final action.

Alternative 2 contains seven options which are designed to clarify current MRA regulations. Although most of the options under Alternative 2 would still be useful if Alternatives 3 and/or 4 were chosen for final action, Alternative 2, Option 3 would no longer be relevant if Alternative 4 is selected. Alternative 2, Option 3 seeks to amend current MRA regulations to correctly cite the regulations identifying AFA vessels and replacement vessels. This clarification would be for current regulations that exclude AFA vessels from being able to calculate MRAs at the time of the offload for BSAI pollock and BS Atka mackerel. However, under Alternative 4, this exclusion would be removed. As a result, Alternative 2, Option 3 would no longer be needed.

The differences between Alternatives 3 and 4 are nuanced. The main difference between the two alternatives is that, under Alternative 3, the instantaneous MRA remains in effect for CVs and certain C/Ps while under Alternative 4 the instantaneous MRA is no longer in effect for any vessel for some or all species depending on the selection of Option 1 or 2. Alternative 3 would remove all trip triggers except when all fish or fish product is offloaded or when the vessel uses a different gear type. Alternative 3

would not remove the instantaneous MRA. Alternative 4 would require MRAs for some species (under Option 1) or all species (under Option 2) to be calculated at the time of offload for all vessel sectors. Under Alternative 4, vessels could retain incidental species before having basis species onboard as long as there was enough basis species onboard at the time of offload. As a result, the following trip triggers would be irrelevant for any species with an MRA calculation at the time of offload: 1) 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. Two trip triggers would remain relevant under Alternative 4: 1) when all fish or fish product is offloaded and 2) if the vessel changes authorized gear type. These two trip triggers would also remain in place under Alternative 3.

If the Council decides to select Alternative 4, Option 2, it is not strictly necessary to also choose Alternative 3 since the removed trip triggers under Alternative 3 would have no effect on the outcome of Alternative 4, Option 2. However, the Council may want to also choose Alternative 3 in this scenario in order to ensure the regulations are clear and that ineffective regulations are removed.

If the Council decides to select Alternative 4, Option 1, then the MRA calculations of species not listed as an offload MRA calculation under Option 1 would vary depending on whether or not the Council also chose Alternative 3 at final action. If Alternative 4, Option 1 is selected without Alternative 3, then MRA calculations would change to offload-to-offload for species listed under Alt. 4 Option 1: BSAI Pacific cod, GOA Pacific cod, GOA pollock, BS skates, CGOA Rockfish Program, and GOA shallow-water flatfish. The MRA calculation period would remain as status quo for all other species, with all five trip triggers remaining in place. However, if the Council chooses both Alternative 4, Option 1 and Alternative 3, species not listed as offload species under Alternative 4, Option 1 would be subject to only two trip triggers, rather than five trip triggers. These species would still have an instantaneous MRA, but their MRAs would be based on the basis species retained since the last offload, or last gear change.

Regardless of which Alternatives the Council selects for final action, three trip triggers must remain in effect for the purposes of calculating MRAs on C/Ps and motherships (Table 2-16). These include 1) when all fish or fish product is offloaded; 2) if the vessel changes authorized gear type; and 3) when the vessel changes FMP area. **NMFS has determined that a new trip is necessary when entering a new FMP area due to the many differences between the MRA percentages for species in the BSAI and GOA. If Alternative 3 or 4 are selected for final action this additional new trip trigger should be added.**

Although the selection of Alternative 3, 4, and/or 5 would simplify MRAs considerably, that does not mean there would not still be complexity involved in MRA calculations. Vessels would still have to perform separate calculations by management program, gear type, per offload, and by FMP area. In addition, vessels would have to track which species may be used as a basis species and for which timeframes during the trip. For example, if a vessel is fishing inside and outside of a SSL protection area where Pacific cod is open to directed fishing outside and closed to directed fishing inside, the vessel would still have to be careful to only include Pacific cod harvested outside the SSL protection area as a basis species, while treating the Pacific cod harvest inside the SSL protection area as a species closed to directed fishing subject to an MRA. In addition, because there are no percentages listed in Tables 10, 11, and 30 to Part 679 (full tables available in Appendix 2) to use a species as a basis species to retain more of that same species, **NMFS assumes that a species open to directed fishing cannot be used as a basis species to accumulate more of that species in areas where it is closed to directed fishing.** Using the above example of Pacific cod, the vessel will also have to subtract the Pacific cod retained outside the SSL protection area from the total basis species used to calculate the amount of Pacific cod that may be retained inside the SSL protection area. Vessels may move in and out of areas with a different fishing prohibition many times while at sea, which will require careful tracking by NMFS and the vessel of which catch may be used as a basis species and when. Table 2-16 summarizes the fishing trip triggers and MRA calculations for C/Ps and motherships that would still be necessary under any alternative. Additional trip triggers and MRA calculations may be required depending on the selected alternatives for final action.

Table 2-16 Minimum MRA trip triggers and calculations for C/Ps and motherships that would be necessary if Alternative 3, 4 or 5 are selected for final action.

Fishing Trip Triggers	When all fish or fish product is offloaded
	The vessel changes authorized gear type
	The vessel changes FMP area
MRA Calculations	For each management program
	For each individual species based on MRA amounts listed in Tables 10, 11, and 30 to Part 679
	Round-weight equivalents must be determined for all species
	Include species as basis species only for time periods when that species was retained while open to directed fishing
	Treat species as an MRA species for time periods when that species was closed to directed fishing
	Ensure species retained while open to directed fishing are not used as a basis species to accumulate more of that species when closed to directed fishing

3 Description of the Groundfish Fisheries

This section provides an overview of the sectors that participate in the groundfish fisheries in the BSAI and GOA, and recent data on participation by community and catch and discards in the groundfish fisheries.

3.1 Groundfish Fishery Sectors

The wide variety of fishing vessels participating in the federally 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. Further economic information for each fishery and fleet can be found in the Groundfish Economic Status report found on the NMFS Alaska Region website; https://www.fisheries.noaa.gov/alaska/ecosystems/economic-status-reports-gulf-alaska-and-bering-sea-aleutian-islands.

All groundfish fishing sectors could be impacted by the proposed MRA revisions depending on the alternatives selected. These sectors include the Amendment 80 (A80) C/P, American Fisheries Act (AFA) C/P, trawl catcher vessel (CV) (AFA CV and non-AFA trawl CV), HAL C/P, HAL CV, and Pot C/P / CV. Note that any federally permitted vessel that retains groundfish is subject to the MRA regulations.

Amendment 80

The A80 sector was implemented in 2008 and facilitated the formation of fishery cooperatives for non-AFA trawl C/Ps. A total of 28 vessels were listed in the final rule as A80 vessels (72 FR 52668, September 14, 2007) but several of these vessels no longer participate. The A80 sector is currently allocated a portion of the TAC for BSAI Atka mackerel, yellowfin sole, rock sole, flathead sole, Pacific cod, and AI POP.

Many A80 vessels also participate in the CGOA Rockfish Program and in the GOA open access (OA) fisheries. All of the CGOA Rockfish Program fisheries had retention rates higher than 90% including POP, Northern rockfish, dusky rockfish, shortraker rockfish, and thornyhead rockfish (Table 3-1). 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.

AFA C/Ps

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% of the directed BSAI pollock C/P allocation.

These large factory trawlers 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. Pollock is the primary species harvested by this sector, but two or three vessels have targeted Pacific cod, while several vessels target yellowfin sole.

Retention rates of pollock are above 99%, but the sector does routinely have high retention rates for several other species (Table 3-2). 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% at some point during the 2020 through 2023 period.

Trawl CVs

The trawl CV sector includes all trawl CVs that 1) are issued an AFA permit for eligibility to participate in the directed BS pollock fishery and 2) are not issued an AFA permit, which includes the Pacific cod Trawl Cooperative (PCTC) program implemented in 2024, the CGOA Rockfish Program, GOA pollock, and various other OA CV trawl fisheries mostly occurring in the GOA. AFA CVs participate in both the inshore and mothership AFA sectors and many AFA CVs also participate in the PCTC program. In the GOA some CVs participate in the CGOA Rockfish Program, or in OA flatfish, rockfish, Pacific cod, and pollock fisheries.

Retention rates for the primary BSAI groundfish species during the 2020 through 2033 period routinely exceeded 90% for pollock, Pacific cod, yellowfin sole, Atka mackerel, POP, and Alaska plaice (Table 3-3). Retention rates in the GOA for pollock, POP, Pacific cod, other rockfish, Northern rockfish, thornyhead rockfish, dusky rockfish, and flathead sole routinely exceed 90% from 2020 through 2023 (Table 3-3).

HAL C/Ps

The HAL C/P sector includes vessels that 1) are part of the Freezer Longline Coalition (FLC) and 2) are not part of the FLC. The FLC is composed of HAL C/Ps participating in the BSAI Pacific cod fishery. A subset of these vessels also participate in the GOA Pacific cod fishery and Alaska-wide sablefish, and historically BSAI Greenland turbot. The FLC operates as a voluntary cooperative and issues quota shares to members in proportion to historical fishing activity associated with each LLP license. A few vessels remain that are not part of the FLC and participate in the sablefish fishery in both the GOA and BSAI.

HAL C/P retention rates for BSAI Pacific cod during the 2020 through 2023 period was 99% and retention rates for BS pollock was greater than 85% for each year (Table 3-4). For BSAI skates, the retention rates were less than 50% during the same period. In the GOA, retention rates for Pacific cod ranged between 98% and 99% during the 2020 through 2023 period while sablefish retention rates for the sector ranged between 72% to 98% during the same period.

HAL CV

HAL CVs target Pacific cod, sablefish, and GOA rockfish. 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 CV 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 are not subject to rockfish MRAs. This action was necessary to improve the identification of rockfish species and provide more precise estimates of rockfish catch. These amendments were effective March 23, 2020.

HAL CV retention rates for the BSAI Pacific cod fishery during the 2020 through 2023 period ranged between 86% and 99% (Table 3-5). For BSAI sablefish, the retention rates ranged between 73% and 100%. In the GOA, retention rates for sablefish ranged between 93% and 96% and Pacific cod retention rates ranged between 66% and 99%. 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.

Pot C/Ps / CVs

Both C/Ps and CVs using pot gear target Pacific cod and sablefish. Pot CV and C/Ps retention rates for the BSAI Pacific cod fishery during the 2020 through 2023 period was over 99%. For BSAI sablefish, the retention rates ranged between 97% and 100% (Table 3-6). In the GOA, retention rates for sablefish were between 97% and 99%. 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 3-1 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 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 3-2 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 3-3 Trawl CV average ex-vessel value ($M), average ex-vessel price ($) 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 3-4 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 3-5 HAL CV average ex-vessel value ($), average ex-vessel price ($) 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 3-6 Pot vessels average ex-vessel 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

3.2 Groundfish Fishery Participation by Community

Provided below in Table 3-7 through Table 3-17 is information regarding groundfish fishery participation and presence by community. Table 3-7 through Table 3-10 describe information for the BSAI Federal groundfish fisheries, and Table 3-11 through Table 3-18 describe information for GOA Federal groundfish fisheries.

Table 3-7 for BSAI groundfish fisheries, and Table 3-11 and Table 3-12 for GOA groundfish fisheries, provide a count of CVs and C/Ps actively engaged in the fisheries by community of historic ownership address. Note that the unique vessel column provides an indication of continuity of participation of individual vessels. Table 3-8 for BSAI groundfish fisheries, and Table 3-13 for GOA groundfish fisheries, provide a description of the ex-vessel gross revenues for CVs and C/Ps in BSAI, and CVs in GOA. Table 3-14 shows C/Ps wholesale revenue while participating in GOA groundfish fisheries by community of vessel ownership. Table 3-9 for BSAI groundfish fisheries, and Table 3-15 for GOA groundfish fisheries, provide information on the number of Alaska shorebased processors accepting deliveries in the relevant fisheries. Location is provided by the location of the processor's operation, rather than ownership address. Table 3-16shows floating processors accepting deliveries of GOA groundfish fisheries by community of operation. Table 3-10 for the BSAI groundfish fisheries, and Table 3-17 and Table 3-18 for the GOA groundfish fisheries, provide the first wholesale gross value of fishery deliveries from the relevant fisheries to shorebased or floating processors. Location is provided by the location of the processor's operation.

Table 3-7 Vessel participation in BSAI Federal Groundfish Fisheries by Community of Historic Vessel Ownership Address, 2014-2023

Geography	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Annual Average 2014-2023 (number)	Annual Average 2014-2023 (percent)	Total Unique Vessels 2014-2023 (number)
Aleutian Islands	0	1	0	0	0	1	1	0	1	1	0.5	0.19%	9
Dutch Harbor/Unalaska	9	8	6	6	6	5	6	6	3	2	5.7	2.12%	19
Other Bering Sea	2	2	1	13	17	8	5	4	2	1	5.5	2.04%	1
Bering Sea	11	10	7	19	23	13	11	10	5	3	11.2	4.16%	48
Anchorage	6	5	5	7	5	4	3	5	10	8	5.8	2.15%	16
Homer	14	17	16	19	18	17	22	18	17	15	17.3	6.43%	35
Kodiak	16	15	22	23	27	26	23	16	20	16	20.4	7.58%	39
Other Central Gulf	6	5	5	6	9	10	8	4	9	6	6.8	2.53%	32
Central Gulf	42	42	48	55	59	57	56	43	56	45	50.3	18.68%	106
Interior	2	1	2	2	2	2	1	2	3	3	2.0	0.74%	5
Petersburg	4	6	7	2	3	4	4	5	5	6	4.6	1.71%	11
Other Southeast	6	11	8	6	4	5	7	7	8	7	6.9	2.56%	21
Southeast	10	17	15	8	7	9	11	12	13	13	11.5	4.27%	32
Western Gulf	0	0	0	0	4	4	5	0	1	1	1.5	0.56%	7
Alaska Total	65	70	72	84	95	85	84	67	78	65	76.5	28.42%	192
Seattle	156	155	161	159	156	148	147	129	138	130	147.9	54.94%	193
Other Washington	18	20	16	15	18	18	18	18	20	15	17.6	6.54%	36
Washington Total	174	175	177	174	174	166	165	147	158	145	165.5	61.48%	221
Oregon Total	20	16	17	20	18	16	18	15	16	13	16.9	6.28%	27
Other States	7	7	7	10	13	14	15	11	10	9	10.3	3.83%	23
Grand Total	**266**	**268**	**273**	**288**	**300**	**281**	**282**	**240**	**262**	**232**	**269.2**	**100.00%**	**427**

*Seattle MSA includes all communities in King, Pierce, and Snohomish counties.

Notes: Due to catcher vessel ownerhship movement between communities over the years shown, total unique catcher vessels per community may not sum to state or grand totals.

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive_FT

Table 3-8 Ex-Vessel Revenue (inflation adjusted dollars) of BSAI Federal Groundfish by Community of Vessel Ownership, 2014–2023.

Geography	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Annual Average 2014-2023 (dollars)	Annual Average 2014-2023 (percent)
Aleutian Islands/Interior	35,445	16,666	39,930	42,750	18,538	190,137	57,843	200,182	646,638	1,531,337	188,717	0.0%
Dutch Harbor/Unalaska	3,449,396	2,233,043	2,240,133	1,960,558	1,491,261	1,570,856	1,345,630	1,126,916	1,468,308	686,331	1,757,243	0.2%
Other Bering Sea	1,010	170	88	7,369	5,671	21,916	113,257	64,985	2,478	988	21,793	0.0%
Bering Sea	3,450,406	2,233,212	2,240,221	1,967,927	1,496,932	1,592,772	1,458,887	1,191,901	1,470,786	687,319	1,779,036	0.2%
Anchorage	26,540,489	36,930,127	37,150,246	36,490,706	6,395,121	4,979,049	3,244,834	7,888,523	16,622,196	15,140,310	19,138,160	2.7%
Homer	3,891,266	3,123,656	5,543,024	4,475,112	5,360,915	7,094,617	6,680,826	4,808,512	8,737,071	7,020,758	5,673,576	0.8%
Kodiak	10,180,807	8,297,147	12,236,793	16,054,906	16,953,488	17,276,499	14,278,398	14,252,377	13,538,715	11,912,755	13,498,189	1.9%
Other Central Gulf	5,178,862	4,014,587	5,081,818	5,261,087	6,651,228	6,520,468	4,693,876	4,025,683	11,741,483	11,201,247	6,437,034	0.9%
Central Gulf	45,791,424	52,365,518	60,011,880	62,281,811	35,360,752	35,870,632	28,897,934	30,975,095	50,639,464	45,275,069	44,746,958	6.3%
Petersburg	10,351,690	19,582,046	22,988,612	4,093,344	4,131,948	5,595,695	3,553,527	5,658,523	11,928,269	7,848,462	9,573,211	1.3%
Other Southeast	1,660,640	1,515,662	771,248	460,674	215,123	925,647	1,488,191	1,854,922	1,608,921	2,360,154	1,286,118	0.2%
Southeast	12,012,330	21,097,708	23,759,860	4,554,017	4,347,071	6,521,341	5,041,718	7,513,445	13,537,190	10,208,616	10,859,330	1.5%
Western Gulf	0	0	0	0	522,707	890,695	1,035,577	0	75,986	371,368	289,633	0.0%
Alaska Total	61,087,256	38,740,306	52,733,212	53,170,121	46,546,874	43,164,870	35,826,597	34,386,048	20,928,704	26,613,763	41,319,775	5.8%
Seattle	613,193,386	807,604,794	793,031,850	761,498,869	472,960,237	501,795,208	710,834,745	349,399,266	375,530,598	365,487,926	575,133,688	80.5%
Other Washington	34,487,176	42,471,908	37,149,482	29,404,085	48,608,421	44,748,494	64,804,940	34,212,110	33,460,960	28,342,645	39,769,022	5.6%
Washington Total	647,680,562	850,076,702	830,181,332	790,902,954	521,568,658	546,543,702	775,639,685	383,611,376	408,991,558	393,830,571	614,902,710	86.1%
Oregon Total	21,722,941	17,653,066	21,176,787	21,329,243	22,724,197	19,151,982	20,218,421	17,418,287	22,505,602	16,806,557	20,070,708	2.8%
Other States	18,975,560	52,416,518	48,035,253	53,216,903	24,897,532	35,271,404	30,108,522	13,768,007	57,751,278	43,905,732	37,834,671	5.3%
Grand Total	749,466,320	958,886,591	952,126,584	918,619,221	615,737,262	644,131,958	861,793,224	449,183,718	510,177,142	481,156,622	714,127,864	100.0%

*Seattle MSA includes all communities in King, Pierce, and Snohomish counties.

Nominal gross revenue adjusted for inflation to 2021 dollars using Federal Reserve Bank of St. Louis Gross Domestic Product: Chain-type Price Index.

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive_FT

Table 3-9 Number of Alaska shorebased processors accepting deliveries of BSAI Federal Groundfish by community of operation, 2014–2023

Community	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Annual Average 2014-2023 (number)	Annual Average 2014-2023 (percent)	Unique SBPRs 2014-2023 (number)
(AAS) Adak	2	1	1	2	1	1	1	0	0	0	0.9	6.47%	3
(AAS) Atka	1	1	1	1	0	0	0	0	0	0	0.4	2.88%	1
(AAS) Saint Paul	1	1	1	1	1	1	0	0	0	0	0.6	4.32%	1
Adak/Atka/Saint Paul	4	3	3	4	2	2	1	0	0	0	1.9	13.67%	5
(ADF) Akutan	1	1	1	1	1	1	1	1	1	1	1.0	7.19%	1
(ADF) Dutch Harbor	4	4	4	3	3	4	4	4	4	4	3.8	27.34%	8
Akutan/Dutch Harbor	5	5	5	4	4	5	5	5	5	5	4.8	34.53%	9
Kodiak	3	1	3	3	2	3	2	0	2	3	2.2	15.83%	5
(CFKS) Cold Bay	0	0	0	0	0	0	0	1	1	0	0.2	1.44%	1
(CFKS) False Pass	0	1	0	0	0	1	1	1	0	0	0.4	2.88%	2
(CFKS) King Cove	1	1	1	1	1	1	1	1	1	1	1.0	7.19%	2
(CFKS) Sand Point	1	1	1	1	1	1	1	1	1	0	0.9	6.47%	1
Cold Bay/False Pass/King Cove/Sand Point	2	3	2	2	2	3	3	4	3	1	2.5	17.99%	6
(DNST) Dillingham	0	0	0	0	0	0	0	1	0	0	0.1	0.72%	1
(DNST) Nome	1	1	1	1	1	1	1	1	1	1	1.0	7.19%	1
(DNST) Savoonga	0	0	0	0	0	1	1	1	0	0	0.3	2.16%	1
(DNST) Togiak	0	0	0	1	0	0	0	0	0	0	0.1	0.72%	1
Dillingham/Nome/Savoonga/Togiak	1	1	1	2	1	2	2	3	1	1	1.5	10.79%	4
(Other Alaska) Anchorage	1	1	0	0	1	0	1	1	0	0	0.5	3.60%	3
(Other Alaska) Homer	2	1	1	0	0	0	0	0	0	0	0.4	2.88%	3
(Other Alaska) Kenai	0	0	1	0	0	0	0	0	0	0	0.1	0.72%	1
Other Alaska	3	2	2	0	1	0	1	1	0	0	1.0	7.19%	7
Total	18	15	16	15	12	15	14	13	11	10	13.9	100.00%	36

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

Table 3-10 Shorebased processor Wholesale Values (inflation adjusted dollars) for BSAI Federal Groundfish by Community of Operation, 2014-2023

Community	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Annual Average 2014-2023 (dollars)	Annual Average 2014-2023 (percent)
Adak/Atka/Saint Paul	14,422,793	1,732,613	162,774	870,483	32,944,635	20,979,370	12,805,943	0	0	0	8,391,861	1.14%
Akutan/Dutch Harbor	698,481,688	632,401,221	669,463,631	637,920,812	697,143,856	785,723,976	665,680,204	640,943,615	711,894,264	772,599,401	691,225,267	94.11%
Kodiak	54,697	58,921	227,907	71,855	9,104	4,528	3,954	0	666,044	20,576	111,759	0.02%
Cold Bay/False Pass/King Cove/Sand Point	18,555,472	21,377,668	18,851,054	19,404,428	40,308,996	37,459,275	34,861,361	38,152,973	62,358,142	52,672,872	34,400,224	4.68%
Dillingham/Nome/Savoonga/Togiak	242	172	98	9,791	6,952	20,208	111,140	137,342	3,796	1,334	29,108	0.00%
Other Alaska	3,109,702	1,048	4,826	31	4,187	15,408	197	2,301	0	0	313,770	0.04%
Grand Total	**734,624,593**	**655,571,644**	**688,710,289**	**658,277,399**	**770,417,729**	**844,202,765**	**713,462,799**	**679,236,231**	**774,922,246**	**825,294,184**	**734,471,988**	**100.00%**

Estimated Wholesale Values adjusted for inflation to 2023 dollars using Federal Reserve Bank of St. Louis Gross Domestic Product: Chain-type Price Index.

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

Table 3-11 Catcher Vessel Participation in Federal Groundfish Fisheries of Alaska by Community of Historic Vessel Ownership Address, 2015-2024 (number of vessels)

Geography	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Annual Average 2015-2024 (number)	Annual Average 2015-2024 (percent)	Unique Vessels 2015-2024 (number)
Aleutian Islands	1	0	0	0	1	1	0	1	1	0	0.5	0.17%	2
Dutch Harbor/Unalaska	6	4	4	3	3	4	4	3	2	1	3.4	1.17%	7
Other Bering Sea	1	1	1	0	1	0	0	0	0	0	0.4	0.14%	2
Bering Sea	7	5	5	3	4	4	4	3	2	1	3.8	1.30%	9
Anchorage/Wasilla	13	16	13	11	10	4	10	11	14	7	10.9	3.74%	32
Homer	61	61	58	33	40	13	35	33	41	32	40.7	13.97%	116
Kodiak	88	94	63	43	41	32	36	43	60	55	55.5	19.05%	152
Other Central Gulf	16	25	17	5	7	4	7	9	6	6	10.2	3.50%	20
Central Gulf	178	196	151	92	98	53	88	96	121	100	117.3	40.27%	328
Interior	8	5	8	3	5	0	6	3	8	1	4.7	1.61%	14
Petersburg	3	7	4	5	4	4	4	4	3	3	4.1	1.41%	8
Other Southeast	8	10	5	4	5	3	4	6	7	5	5.7	1.96%	27
Southeast	11	17	9	9	9	7	8	10	10	8	9.8	3.36%	34
King Cove	8	8	9	5	5	2	5	5	5	4	5.6	1.92%	11
Sand Point	19	16	12	16	15	6	9	8	17	12	13.0	4.46%	37
Other Western Gulf	2	2	2	2	0	1	0	1	1	1	1.2	0.41%	2
Western Gulf	29	26	23	23	20	9	14	14	23	17	19.8	6.80%	53
Alaska Total	234	249	196	130	137	74	120	126	164	127	155.7	53.45%	432
Seattle	105	108	108	100	102	101	88	93	86	75	96.6	33.16%	129
Other Washington	15	13	11	15	14	13	14	12	10	9	12.6	4.33%	30
Washington Total	120	121	119	115	116	114	102	105	96	84	109.2	37.49%	152
Newport	10	10	12	11	9	8	8	9	8	8	9.3	3.19%	14
Other Oregon	12	13	13	11	10	13	12	9	10	8	11.1	3.81%	22
Oregon Total	22	23	25	22	19	21	20	18	18	16	20.4	7.00%	32
Other States	6	6	6	8	8	9	6	6	3	2	6.0	2.06%	20
Grand Total	382	399	346	275	280	218	248	255	281	229	291.3	100.00%	595

*Seattle MSA includes all communities in King, Pierce, and Snohomish counties.

Notes: Due to catcher vessel ownerhship movement between communities over the years shown, total unique catcher vessels per community may not su

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive_FT

Table 3-12 Catcher Processor Participation in Federal Groundfish Fisheries of Alaska by Community of Historic Vessel Ownership Address, 2015-2024 (number of vessels)

Geography	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Annual Average 2015-2024 (number)	Annual Average 2015-2024 (percent)	Unique Vessels 2015-2024 (number)
Anchorage/Wasilla	4	4	4	4	4	3	3	5	4	2	3.7	5.77%	6
Other Alaska	6	1	1	1	2	1	1	1	3	2	1.9	2.96%	9
Alaska Total	10	5	5	5	6	4	4	6	7	4	5.6	8.74%	14
Seattle	49	55	51	49	47	45	43	42	41	38	46.0	71.76%	58
Other Washington	7	7	7	7	7	6	5	6	4	4	6.0	9.36%	7
Washington Total	56	62	58	56	54	51	48	48	45	42	52.0	81.12%	65
Other States	5	5	7	7	7	8	7	7	6	6	6.5	10.14%	8
Grand Total	71	72	70	68	67	63	59	61	58	52	64.1	100.00%	80

*Seattle MSA includes all communities in King, Pierce, and Snohomish counties.

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

Table 3-13 Catcher Vessel's Ex-Vessel Revenue while Participating in Federal Groundfish Fisheries of Alaska by Community of Vessel Ownership, 2015–2024 (in Millions of 2024 dollars)

Geography	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Annual Average 2015-2024 (dollars)	Annual Average 2015-2024 (percent)
Aleutian Islands/Interi	4.1	3.3	4.4	1.3	2.5	.1	4.4	1.8	*	*	2.7	0.5%
Bering Sea	5.3	4.5	4.5	2.7	3.1	3.5	3.8	2.6	*	*	3.2	0.6%
Anchorage	5.1	3.9	5.7	1.6	2.1	.1	3.9	6.7	4.1	.0	3.3	0.6%
Homer	37.8	34.6	38.4	21.5	23.9	10.4	30.3	32.2	20.7	21.5	27.1	5.1%
Kodiak	80.3	73.3	76.5	62.4	58.6	43.2	45.0	65.7	50.6	44.4	60.0	11.3%
Other Central Gulf	18.2	24.1	20.9	15.9	15.0	8.1	15.3	22.3	18.1	12.2	17.0	3.2%
Central Gulf	141.4	135.9	141.5	101.3	99.6	61.7	94.6	126.8	93.5	78.1	107.4	20.3%
Petersburg	6.3	17.9	11.1	8.2	9.1	6.2	9.9	18.5	8.6	5.2	10.1	1.9%
Other Southeast	5.4	3.7	2.3	1.3	2.9	2.3	5.0	6.9	5.5	3.4	3.9	0.7%
Southeast	11.7	21.5	13.4	9.5	12.0	8.6	14.9	25.5	14.1	8.6	14.0	2.6%
King Cove/Other WG	10.5	9.2	16.5	4.0	5.2	1.9	6.7	8.0	4.2	1.6	6.8	1.3%
Sand Point	13.1	10.1	14.5	6.5	8.1	3.8	9.2	8.4	5.0	6.6	8.5	1.6%
Western Gulf	23.6	19.3	31.0	10.5	13.3	5.7	15.9	16.4	9.3	8.2	15.3	2.9%
Alaska Total	186.0	184.5	194.7	125.4	130.6	79.6	133.6	173.0	122.9	95.7	142.6	26.9%
Seattle	366.3	350.1	340.5	355.4	361.1	341.5	283.9	259.7	247.6	184.4	309.1	58.3%
Other Washington	41.3	32.1	26.6	34.2	31.8	26.5	29.9	32.0	23.3	18.8	29.6	5.6%
Washington Total	407.6	382.2	367.1	389.6	392.9	368.1	313.8	291.7	270.8	203.2	338.7	63.9%
Newport	20.6	20.7	24.6	26.0	22.1	15.1	13.3	22.4	16.7	13.4	19.5	3.7%
Other Oregon	31.7	26.8	22.9	21.0	21.8	22.4	24.9	21.4	13.4	8.7	21.5	4.1%
Oregon Total	52.3	47.5	47.5	47.0	43.9	37.4	38.3	43.8	30.1	22.0	41.0	7.7%
Other States	3.3	4.6	11.6	11.0	10.0	10.3	9.9	8.9	*	*	7.6	1.4%
Grand Total	649.2	618.8	620.9	573.1	577.5	495.5	495.5	517.3	428.4	322.7	529.9	100.0%

*Seattle MSA includes all communities in King, Pierce, and Snohomish counties.

Nominal gross revenue adjusted for inflation to 2021 dollars using Federal Reserve Bank of St. Louis Gross Domestic Product: Chain-type Price Index.

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive_FT

Table 3-14 Catcher Processor's Wholesale Revenue while Participating in Federal Groundfish Fisheries of Alaska by Community of Vessel Ownership, 2015–2024 (in Millions of 2024 dollars)

Geography	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Annual Average 2015-2024 (dollars)	Annual Average 2015-2024 (percent)
Anchorage/Wasilla	83.0	*	*	*	*	*	*	*	74.1	*	80.4	5.4%
Other Alaska	36.9	*	*	*	*	*	*	*	6.1	*	5.9	0.4%
Alaska Total	120.0	86.8	87.1	82.2	88.2	83.4	78.3	84.6	80.1	72.4	86.3	5.8%
Seattle	1316.6	1378.9	1443.4	1381.2	1342.4	1110.6	1066.7	1168.8	1102.0	1047.0	1235.7	83.1%
Other Washington	71.6	66.5	77.3	72.0	56.0	45.6	38.0	57.8	46.0	55.6	58.6	3.9%
Washington Total	1388.2	1445.4	1520.6	1453.2	1398.5	1156.1	1104.6	1226.6	1148.0	1102.6	1294.4	87.1%
Other States	59.4	57.9	135.9	147.2	133.9	110.5	88.4	119.7	99.3	105.3	105.8	7.1%
Grand Total	1567.6	1590.1	1743.5	1682.6	1620.6	1350.0	1271.4	1430.9	1327.4	1280.2	1486.4	100.0%

*Seattle MSA includes all communities in King, Pierce, and Snohomish counties.

Nominal gross revenue adjusted for inflation to 2021 dollars using Federal Reserve Bank of St. Louis Gross Domestic Product: Chain-type Price Index.

Source: ADFG/CFEC Fish Tickets, data compiled by AKFIN in Comprehensive_FT

Table 3-15 Shorebased Processors Accepting Deliveries of Federal Groundfish Fisheries of Alaska by Community of Operation, 2015-2024 (number of processors)

Community	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Annual Average 2015-2024 (number)	Annual Average 2015-2024 (percent)	Unique Processors 2015-2024 (number)
Dutch Harbor	4	4	3	3	4	4	4	4	4	4	3.8	17.04%	6
Other BSAI	1	1	1	2	3	2	1	1	1	1	1.4	6.28%	3
BSAI Total	5	5	4	5	7	6	5	5	5	5	5.2	23.32%	9
Kodiak	11	9	7	6	5	6	7	6	6	7	7.0	31.39%	14
Other Central Gulf	5	7	10	6	5	0	4	6	6	3	5.2	23.32%	14
Central Gulf Total	16	16	17	12	10	6	11	12	12	10	12.2	54.71%	28
Southeast Total	2	3	3	3	3	1	2	2	2	1	2.2	9.87%	8
Western Gulf Total	3	2	2	2	3	3	4	3	2	2	2.6	11.66%	6
Grand Total	26	26	26	23	23	16	22	22	21	18	22.3	100.00%	52

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

Table 3-16 Floating Processors Accepting Deliveries of Federal Groundfish Fisheries of Alaska by Community of Operation, 2015-2024 (number of processors)

Community	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Annual Average 2015-2024 (number)	Annual Average 2015-2024 (percent)	Unique Processors 2015-2024 (number)
Alaska	4	5	5	4	2	1	1	1	1	1	2.5	16.13%	7
Seattle WA	14	15	14	14	13	13	12	12	12	11	13.0	83.87%	19
Total	18	20	19	18	15	14	13	13	13	12	15.5	100.00%	26

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

Table 3-17 Shore-Based Processor's Wholesale Revenue while Accepting Deliveries of Federal Groundfish Fisheries of Alaska by Community of Vessel Ownership, 2015–2024 (in Millions of 2024 dollars)

Geography	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Annual Average 2015-2024 (dollars)	Annual Average 2015-2024 (percent)
Dutch Harbor	*	*	*	420.0	*	*	*	*	*	*	437.2	48.4%
Other BSAI	*	*	*	304.6	*	*	*	*	*	*	262.8	29.1%
BSAI Total	634.0	680.2	653.1	724.6	814.6	683.8	654.0	695.8	773.5	685.7	699.9	77.6%
Kodiak	192.2	175.3	161.9	156.5	122.1	104.9	103.0	147.1	135.0	115.1	141.3	15.7%
Other Central Gulf	5.9	22.8	36.2	41.6	76.0	93.1	95.1	51.0	63.1	82.9	56.8	6.3%
Central Gulf Total	198.1	198.1	198.1	198.1	198.1	198.1	198.1	198.1	198.1	198.1	198.1	22.0%
Southeast Total	*	*	*	.2	*	*	*	*	*	*	.1	0.0%
Western Gulf Total	*	*	*	67.3	*	*	*	*	*	*	57.6	6.4%
Grand Total	903.0	937.1	869.8	951.4	1009.8	831.7	815.1	925.6	969.6	811.0	902.4	100.0%

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

Table 3-18 Floating Processor's Wholesale Revenue while Accepting Deliveries of Federal Groundfish Fisheries of Alaska by Community of Vessel Ownership, 2015–2024 (in Millions of 2024 dollars)

Geography	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Annual Average 2015-2024 (dollars)	Annual Average 2015-2024 (percent)
Alaska	105.7	109.4	91.7	*	*	*	*	*	*	*	58.9	18.9%
Seattle WA	280.5	347.9	387.9	*	*	*	*	*	*	*	253.3	81.1%
Total	386.2	457.3	479.6	464.7	280.4	199.8	184.2	250.7	218.6	200.5	312.2	100.0%

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

3.3 Discarded Catch by Target Species Tables

The NMFS catch accounting system (CAS) assigns a "target" species designation to each haul made by a C/P or delivery made by a CV based on the predominant species in the catch. Table 3-19 through Table 3-24 describe the estimated amount of discarded groundfish catch by species from 2020 through 2024 by targets in the BSAI for each sector. Table 3-25 through Table 3-29 show the same information for the GOA. More detailed annual discard information can be found in NMFS inseason management reports posted on the NMFS Alaska Region website.[14]. There are a couple of caveats that are important to understand about the data in these tables. First, a species might be assigned the target of a haul even though that species might not be open to directed fishing. This occurs because that species is the predominant species in the haul. This may be due to the vessel topping off on that species, or it may be due to a higher-than-expected aggregation of that species when the haul was made. Second, it is common for multiple species to be open to directed fishing for a vessel at the same time and it is permissible for vessels to participate in multiple directed fisheries in the same trip. The tables only show targets based on the predominant species and do not necessarily represent which directed fishery the vessel spent the majority of time participating in.

14 https://www.fisheries.noaa.gov/alaska/sustainable-fisheries/inseason-fisheries-management-alaska

Table 3-19 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. The “Rockfish” target fishery category includes POP, among other rockfish species.

Table 3-20 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. The "Rockfish" target fishery category includes POP, among other rockfish species.

Table 3-21 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. The "Rockfish" target fishery category includes POP, among other rockfish species.

Table 3-22 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. The "Rockfish" target fishery category includes POP, among other rockfish species.

Table 3-23 Average discarded catch (mt) of groundfish in the BSAI by target for the HAL CV sector (2020-2024)

Species	Target fishery: 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 3-24 Average discarded catch (mt) of groundfish in the BSAI by target for the pot sector (2020-2024)

Species	Target fishery: 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. The "Rockfish" target fishery category includes POP, among other rockfish species.

Table 3-25 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. The "Rockfish" target fishery category includes POP, among other rockfish species.

Table 3-26 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. The "Rockfish" target fishery category includes POP, among other rockfish species.

Table 3-27 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 3-28 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. The "Rockfish" target fishery category includes POP, among other rockfish species.

Table 3-29 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. The “Rockfish” target fishery category includes POP, among other rockfish species.

3.4 BSAI and GOA Groundfish Species

Provided below in Table 3-6 through Table 3-32 is information regarding harvest of each BSAI and GOA groundfish fishery by species. More detailed information regarding groundfish species can be found in the SAFE reports found on the Council website; https://www.npfmc.org/library/safe-reports/. Vessels may direct fish on multiple groundfish species and retain numerous other groundfish species up to the MRA during each fishing trip. If several species are caught together (which is generally the case), the predominant retained species is assigned as the target in the NMFS's CAS regardless if multiple species are being directed or not. The amount of non-target catch retained for each target species does not reflect accurate MRA proportions because there may be additional species included in the basis species other than the target.

Summary tables in this section include species that are caught in conjunction with the target groundfish species as determined by CAS. The "rockfish" target includes all rockfish species, including POP, northern rockfish, and dusky rockfish. Table 3-30 shows the value of the groundfish fisheries in the North Pacific for each species and FMP area. Further economic information can be found in the Groundfish Economic Status report found on the NMFS Alaska Region website; https://www.fisheries.noaa.gov/alaska/ecosystems/economic-status-reports-gulf-alaska-and-bering-sea-aleutian-islands.Table 3-31 and Table 3-32 show the average total BSAI and GOA (respectively) target species and incidental catch by target fisheries and groundfish species. Tables 10, 11, and 30 in Appendix 2 show the permissible MRA for each species in the GOA, BSAI, and in the CGOA Rockfish Program respectively.

Full retention of some species is required for some sectors. Fixed gear CVs have been required to fully retain all rockfish species in the GOA and BSAI since March of 2020 (85 FR 9687, February 20, 2020) regardless of the status of the rockfish species and the economic value of those species. As a result, there has been increased rockfish retention in recent years. Likewise, the trawl EM program for pollock in the BSAI and GOA requires full retention of all species regardless of the status of those species or the economic value of those species. Regulations for the EM program took effect in August 2024 (89 FR 60796, July 29, 2024) but it has operated under an exempted fishing permit (EFP) since 2020. IFQ holders operating on CVs are required to retain all sablefish if there is quota remaining, but presumably these sablefish are sold and therefore have economic value.

Table 3-30 Average BSAI and GOA wholesale value ($), ex-vessel price ($) 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

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 3-31 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. The "Rockfish" target fishery category includes POP, among other rockfish species.

Table 3-32 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. The “Rockfish” target fishery category includes POP, among other rockfish species.

4 Management and Enforcement Considerations

The proposed changes listed in this section would likely have several management and enforcement impacts. The alternatives were designed to address the problems identified with Alternative 1, however, Alternatives 3 and 4 would also raise additional management and enforcement considerations, as discussed in this chapter. Modifying trip triggers from five triggers to two triggers for C/Ps and motherships (Alternative 3), 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 (Alternative 3 and Alternative 4 Option 1 for some species), but the trip trigger changed to offload-to-offload, C/Ps and motherships would still need to calculate the MRAs instantaneously 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 as proposed under Alternative 4 Option 2, all vessels (C/Ps, motherships, and CVs) would no longer need to track MRAs at any given time, and instead would only track MRAs by management program for the entirety of the fishing trip (offload-to-offload, Alternative 4). 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.

4.1 Regulatory Discards

As proposed under Alternative 4, Options 1 and 2, changing the MRA application for some or all species to offload-to-offload calculations rather than instantaneous calculations 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 MRA regulations to decrease discards. Under status quo, 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 species closed to directed fishing 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 under status quo 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 (Alternative 4), then it is possible that fewer regulatory discards would occur because they could retain more at the beginning of the trip as long as there was enough basis species by the time of the offload. It is also possible that fewer regulatory discards would occur if a fishing trip was redefined to have fewer trip triggers that require the calculation of MRAs (Alternative 3).

For example, a HAL C/P 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% by weight of Pacific cod (Table 11 part 679 under “other species,” see Appendix 2). 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 it has 200 mt of Pacific cod onboard, then under Alternative 4, 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 HAL C/P vessel harvests fish for three weeks before coming to port to offload, then under status quo the vessel has created at least three fishing trips (one for each weekly reporting period). In this example, the HAL C/P 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 (Alternative 3), 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 has harvested enough basis species to ensure it is not over an MRA, putting it in violation.

4.2 Improved Retention/Improved Utilization

In addition to the MRA regulations, all vessels must comply with IR/IU regulations. It is somewhat unclear if MRA or IR/IU regulation takes precedence for CVs. 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 for C/Ps and motherships.

If a fishing trip for C/Ps and motherships were 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 (50 CFR 679.20(e)(3)(ii)). Under the current MRA regulations, a new fishing trip is automatically triggered when a vessel enters an area with a different directed fishing prohibition. That vessel is restricted to the lowest MRA for the duration of the fishing trip. 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 (*i.e.,* A80 C/Ps) using trawl gear in the BSAI, all species listed in Table 2a to 50 CFR part 679 (See Sections 3.1 and 2.5 for more information regarding this A80 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% 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 4.5, 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 Annual MRA Calculation for Pollock in the BS

Expanding the MRA calculation period from offload-to-offload to an annual framework for non-AFA C/Ps that harvest incidental amounts of pollock in the BS could significantly improve retention and utilization of pollock while simplifying compliance. The current offload-to-offload method for BSAI pollock has been effective in reducing regulatory discards by allowing vessels to manage incidental catch of pollock throughout their time at sea. However, pollock remains the largest source of discards in the BS by volume, and operators often discard catch due to short-term fluctuations in catch composition, 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 of pollock effectively. Broadening the MRA timeframe in the BS would extend these advantages further, allowing vessels to balance retention over a longer period while maintaining compliance with conservation objectives.

Aligning MRA calculations with a longer accounting period could improve retention, and may ease compliance burdens by consolidating enforcement efforts over time rather than on a per-trip basis. This option may introduce some complexity for enforcement and companies as they will need to track all basis species across multiple trips throughout the year. Additionally, this approach could render the exemptions specified in Alternative 6 unnecessary..

If the Council were to consider this option, limiting it initially to non-AFA C/Ps that harvest incidental amounts of pollock in the BS could serve as a test case for potential application to other species and sectors. Given that BS pollock MRAs are already managed on an offload basis for non-AFA C/Ps, 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 if other species were to be considered. Implementing an annual MRA for non-AFA pollock C/Ps in the BS 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.

However, under an annual pollock MRA calculation, A80 vessels and CDQ C/Ps directed fishing for A80 species may put themselves at risk of being over the yearly MRA if the vessel experiences an unexpected mechanical issue that prevents it from fishing for the entire year. For example, if a vessel is planning on fishing from January until November the vessel may retain all of their pollock at the beginning of the year with the expectation that they would accumulate more basis species later in the year when pollock is not encountered as frequently. If the vessel had a major mechanical issue in June, for example, and is unable

to fish for the remainder of the year, then that vessel will likely end up over the yearly MRA of pollock. In addition, if a vessel should discard pollock at the beginning of the year they could be in violation of the IR/IU regulations which prohibit discarding of pollock until the MRA is reached. It might be difficult for vessels to predict when the MRA is reached to stay in compliance with the IR/IU regulations under a yearly MRA calculation.

In addition, as discussed in Section 2.5, an annual MRA calculation for BS pollock could have a direct impact on the AFA sector if A80 increases the amount of BS pollock catch in a year. This could result in NMFS setting the pollock ICA larger for the subsequent year thus reducing the amount of pollock available to AFA. This is further discussed in Section 4.4.

4.4 Incidental Catch Allowance Set Asides

NMFS is required to account for all harvest of a species against its TAC, which includes discards, incidental catch, and directed catch. An ICA is a portion of the TAC set aside for vessels which are not engaged in directed fishing for a species, but will encounter that species while participating in other fisheries. Although incidental catch by definition is technically non-directed catch that is retained, when NMFS sets aside an ICA, it is meant to include any retained or discarded catch in the non-directed fishery. The remainder of the TAC, after deduction of the ICA, is called the DFA and is the amount of TAC available to vessels that are directed fishing for that species. For some species, like BSAI pollock, the ICA is set in the annual Harvest Specifications. This is necessary for species where the DFA is fully allocated to a catch share program such as AFA or A80. The ICA for species not specified in the yearly Harvest Specifications are determined by NMFS and constantly re-evaluated throughout the year for accuracy. NMFS determines the ICA inseason by looking at the most up-to-date information on catch, participation, and projected ICA needs for the remainder of the year. Alternatives 3, 4, and 5 could increase the ICA compared to historical years.

Alternative 3 would remove the trip trigger that ends a trip on the effective date of a notification prohibiting directed fishing in the same area under § 679.20 or § 679.21. Under Alternative 4 the trip triggers would remain but MRA calculation would be done at the time of offload for some species (under Option 1) or all species (under Option 2), thus making the trip trigger that ends a trip on the effective date of a notification prohibiting directed fishing in the same area obsolete. The MRA calculation for C/Ps and motherships under Alternatives 3 and 4 may result in greater catch of some species when closed to directed fishing requiring NMFS to set aside larger ICAs in some cases. This could be an issue if NMFS closes a species to directed fishing while a C/P or mothership is in the middle of a fishing trip. Current regulations provide that a fishing trip ends on the effective date of a notification prohibiting directed fishing. Under Alternative 4, the MRA is calculated at the time of offload, which means the vessel can use all basis species onboard for calculating the offload MRA. Under Alternative 3, the MRA calculation would continue as part of the same trip, which means that basis species from prior to the closure could be used to retain more of the species that closed to directed fishing. Although under Alternative 3 the MRA calculation remains instantaneous, the vessel may already have plenty of basis species onboard to continue to retain the species that NMFS closed to directed fishing. This could result in additional topping off of a species after it closes to directed fishing in order to reach the MRA based on the basis species onboard.

For example, a C/P AFA vessel is mainly fishing for pollock, but Pacific cod is also open to directed fishing. The vessel retains all pollock and all Pacific cod during this timeframe. On day five of a ten-day trip, NMFS announces that Pacific cod is now closed to directed fishing. Under the status quo, that vessel must start a new trip for the purposes of MRA accounting and may only use pollock (the basis species) accumulated starting on day five to calculate the amount of Pacific cod that may be retained going forward. However, under Alternatives 3 and 4, the vessel may use all the pollock onboard the vessel, even if harvested prior to the Pacific cod closure, to calculate the Pacific cod MRA. As a result, the vessel may

retain more Pacific cod under Alternatives 3 and 4 than under the status quo which creates an incentive to top off on Pacific cod in order to maximize catch and retain up to the MRA.

This would also add a level of complexity to the MRA calculations because a vessel will have to divide Pacific cod harvest (from the above example) between harvest that occurred when Pacific cod was open to directed fishing and used as a basis species, and harvest that occurred after the fishery closed and Pacific cod could no longer be used as a basis species. In this scenario Pacific cod could only be used as a basis species up until it was closed to directed fishing, while other species, such as pollock, could be used as a basis species for the entirety of the fishing trip. Thus, the species that are used as basis species might change multiple times throughout the fishing trip.

Although Alternatives 3 and 4 could result in more incidental catch being taken for some species, it hinges on whether or not that species is being encountered naturally or if topping off is actively occurring. Using the above example, if the C/P AFA vessel is naturally encountering a lot of Pacific cod while pollock fishing after the Pacific cod directed fishing closure, then overall catch of Pacific cod would not necessarily increase. Instead, retention of Pacific cod, which would otherwise be discarded under the status quo, would increase instead. Under this scenario, NMFS would not need to increase the ICA because retention has increased while discarding has decreased, resulting in the same amount of ICA needed. This scenario would be extremely beneficial to industry by increasing retention while reducing discards with no notable downstream effects on other sectors. ICAs only become an issue under Alternatives 3 and 4 if additional topping off occurs (due to an increased amount of basis species being onboard compared to status quo) after the directed fishing closure resulting in more overall harvest of that species. In addition, this is only an issue when there is a notification prohibiting directed fishing while a vessel is mid-trip because it would have more basis species than expected under the status quo for calculating the MRA. Subsequent trips should not pose an issue in terms of increasing the ICA.

When setting inseason ICAs, NMFS tries to evaluate all the factors currently taking place in the fishery in order to make the best decision possible. When setting ICAs in the annual harvest specifications, ICAs are determined by looking at catch in previous years. The goal is to ensure other fisheries have enough ICA of a species to complete their fisheries for the year, while also making a DFA available for vessels directly reliant on that species. Because these decisions are made inseason and based on best available current information, or made in the annual harvest specifications and based on previous years' harvest, it is unknown if NMFS would need to increase some ICAs or not. For inseason ICAs, NMFS would need to evaluate the activities of each sector and determine if it is likely that vessels in the middle of a trip when NMFS prohibits directed fishing will engage in additional topping off behavior for the remainder of that trip. This issue would also likely be contained to just a few situations, such as when determining the overall closure of directed fishing for Pacific cod in the BS. In addition, it seems unlikely that if the ICA was increased either inseason or in the annual Harvest Specifications, it would be a large increase because only C/Ps and motherships in the middle of a fishing trip would have the ability to engage in additional topping off behavior. It is also possible that vessels already encounter these species naturally which would improve retention and not increase overall harvest, thus not requiring an increase in the ICA. Vessels may also choose not to engage in topping off behavior if this situation arose due to vessel capacity constraints or wanting to concentrate their efforts on other, more valuable species.

The risk of potential topping off that might increase an ICA could be mitigated by adopting Method 2 for either Alternative 3 or 4 to calculate MRAs. Under Method 1, a vessel could use all basis species onboard the vessel from both before and after the directed fishing closure to retain more of that species. Under Method 2, only basis species accumulated after the closure could be used to retain more of the species. Method 2 would severely limit a vessel's ability to top off on that species after the closure, however, it would also require discarding of this species until enough basis species was accumulated onboard (Alternative 3) or projected to be on board at the time of offload (Alternative 4). Alternative 3 Method 2 would not reduce regulatory discarding from the status quo. Alternative 4 Method 2 would likely slightly reduce discards from the status quo. Table 5-3 in Section 5.3.5 shows the possible tradeoffs between

regulatory discards and increased opportunity for topping off in SSL protection areas, but the same table is applicable to ICAs as well. One option for Method 2 is to just limit the species that is closed to directed fishing midtrip to an MRA calculation that only uses newly accumulated basis species, while continuing to let all other MRA species accrue against all basis species onboard from both before and after the fishery closures.

As discussed under Section 2.5, under Alternative 5, there is an introduced risk of the overall amount of BS pollock harvested by A80 vessels increasing. Having a yearly MRA calculation may provide an opportunity to top off in greater amounts at the beginning of the year when they encounter more pollock if vessels think they will accumulate enough basis species by the end of the year. This could result in more discarding of pollock later in the year if they don't end up having enough basis species, which could increase the overall catch (retained plus discarded catch) of pollock by the sector for the year. If the amount of pollock catch increases by the A80 sector then NMFS would set a larger ICA in the annual harvest specifications, which would result in less pollock being available for the AFA sector. Section 2.5 discusses an option the Council could consider to add an IPA requirement or other control measures to ensure pollock catch by the A80 sector does not exceed historical amounts and that NMFS does not have to set a larger ICA in the future. As discussed in more detail in Section 2.5, public testimony during initial review and further consultation with industry representatives have indicated that a substantial increase in pollock harvest under Alternative 5 is unlikely.

4.5 Enforcement Considerations

This Section contains input from the NOAA Office of Law Enforcement (OLE), Alaska Division.

As stated in Section 6.2 of the BSAI and GOA FMPs, a meaningful enforcement program must accompany management measures for them to be effective (NPFMC 2020a and NPFMC 2020b). OLE provides the following information for each alternative for the Council's consideration.

Alternative 1

Existing MRA regulations are complex. Additionally, instantaneous MRAs applicable to CVs can be difficult to enforce. Often, CVs store their catch in refrigerated seawater tanks that are inaccessible to at-sea enforcement, and most CVs operate without scales, making calculating exact catch weights and percentages impractical until CVs offload and weigh all of their catch. Put another way, although MRAs on some CVs apply instantaneously, enforcing them instantaneously is not practical in most cases, aside from when a violation is clearly egregious.

Under the status quo, existing offload-to-offload MRA calculations allow fishing in areas where directed fishing closures apply such as in SSL protection areas. In other words, this method of MRA calculation enables vessels a greater ability to target species that directed fishing closures aim to restrict. If the Council decides to recommend the adoption of offload-to-offload MRA calculations more broadly as contemplated under Alternative 4, OLE encourages the Council to consider if this is the right management tool to meet its management objectives with regard to sensitive closure areas specified at § 679.22.

In enforcing MRA overage violations, OLE officers consider extenuating circumstances and decisions made by an operator when those issues are raised, in particular those involving safety of life at sea. Under current practice, when a fishing vessel operator claims that a mechanical, medical or weather emergency impaired their ability to comply with a regulation, OLE and the Office of General Counsel will consider any input that the operator provides. OLE may look to other vessels fishing in the area as a reference point for comparison when evaluating potential extenuating circumstances and evaluating individual vessel behavior. In any case, if OLE does not grant the relief the operator requests, the operator has a right to request a hearing before an administrative law judge, if the agency has issued a violation notice.

Alternative 2

Alternative 2, Options 1-6 generally would clarify regulations related to MRAs.

Regarding Alternative 2, Option 1, however, OLE has expressed concerns with the complexity of applying trip triggers to CVs delivering unsorted codends to motherships, particularly as to CVs that document the location of their hauls exclusively on paper logbooks. Accordingly, and contrary to Alternative 2, Option 1, OLE recommends each CV delivery to a mothership be a single trip for simplicity of calculations for industry and OLE. As with Alternative 2 Option 1, under Option 2, motherships receiving delivery of unsorted codends would be responsible for abiding by MRA limitations.

Alternative 2, Option 7 regulations would improve compliance under the Trawl EM Program by seeking to exempt participating vessels from directed fishing violations resulting from non-pollock incidental catch events, such as the "red bag" described in Section XX. Under Option 7, parties to a Trawl EM Incentive Plan Agreement (IPA) would continue to be responsible for monitoring individual vessel behavior and incentivizing vessel operators to prevent directed fishing violations. Without a regulatory prohibition, OLE would not be involved in enforcing the IPA provision.

Alternative 3

The analysis considers two methods for calculating MRAs under Alternatives 3 and 4 as described in section 3.4.2. Though limiting options for real-time at-sea enforcement, Method 2 is preferred by OLE, as it may continue to allow for clear enforcement of directed fishing closures specified at 50 C.F.R. § 679.22 upon offload, especially those established to protect specific sites. This would further limit retention of SSL prey species in those areas.

Under Alternative 3, OLE would be concerned with its ability to enforce the prohibition on directed fishing for pollock, Pacific cod, or Atka mackerel in SSL protection areas. Harvest of these fish is permitted inside these areas, however MRA regulations limit how much fish can be retained there. Eliminating trip triggers, particularly "when a vessel enters or leaves an area with a different fishing prohibition," would substantially enlarge the time period and/or associated fishing activity that is used to calculate directed fishing. Additionally, basing a trip trigger on the offload of "*all* fish or fish product" is problematic because C/Ps and motherships often retain some catch for personal use such that not all fish or fish products are removed from the vessel at the time of offload. **If the use of offload-to-offload MRA calculations is expanded, OLE recommends that for all vessels, any trip trigger be based on the offload of "any," not "all" fish or fish product.**

Alternative 4

OLE is concerned that adding additional species to an offload-to-offload MRA application as described under Options 1 and 2 would present enforcement challenges. Offload calculations become more complex for enforcement of spatial closures for a species around specific sites. Any assessment of directed fishing for these species would have to wait until offload, creating challenges to effectively enforce larger fishery closures, gear limitations and restrictions, license limitation and limited access privilege programs, and observer program requirements tied to directed fishing.

By definition, directed fishing requires a calculation of retained catch over a defined period of time, and, for catcher vessels, those retained catch weights are only estimates prior to offload. At-sea enforcement has always been limited to egregious violations in this regard. For C/Ps and motherships, data for retained species is readily available in near real time through electronic logbooks, with only slight delays between reporting the estimated and realized scale weights. Shifting to an offload-to-offload MRA calculation represents a substantive change in enforceability, as a violation would only **exist** upon offload, and no longer while a vessel is actively fishing within a closed area, out of season, without an observer or EM system, or without a required permit. The assessment of directed fishing would be rendered exclusively a

retrospective exercise that depends on recorded landings, disposition of the harvest (retained or discarded) at offload, and no longer on real-time observation.

OLE's core enforcement tools for closures, gear restrictions, license limitations, observer requirements, and other real-time prohibitions would remain largely intact, but enforcement will be delayed even for suspected egregious violations. For example, a vessel might engage in fishing for Pacific cod in federal waters without a License Limitation Program groundfish license, but enforcement options would only become available after an offload when an MRA is established.

The offload-to-offload framework adjusts the timeframe over which directed fishing is evaluated, without removing or diminishing any existing enforcement authority.

The analysis considers two methods for calculating MRAs under Alternatives 3 and 4. As described in Alternative 3 above, Method 2 is preferred by OLE, as it may continue to limit retention of SSL prey species in those directed fishing closure areas.

Under Alternative 4 that would move additional species to offload-to-offload MRA calculations, below are some examples of the prohibitions (note that this list is not exhaustive) that would no longer be enforceable in real time ***at-sea***, however these would be enforceable after an offload:

- § 679.7(a)(1)(ii) Conduct directed fishing for Atka mackerel, Pacific cod, or pollock with pot, hook-and-line, or trawl gear from a vessel of the United States that does not have on board a legible copy of a valid FFP issued under § 679.4 and endorsed for Atka mackerel, Pacific cod, or pollock under § 679.4(b).
- § 679.7(a)(2) Conduct any fishing contrary to notification of inseason action, closure, or adjustment issued under § 679.20, § 679.21, § 679.22, § 679.25.
- § 679.7(i)(2) [License Limitation Program] Conduct directed fishing for license limitation groundfish without a legible copy of a valid groundfish license, except as provided in § 679.4(k)(2);
- § 679.7(j)(1)(iii). Fail to comply with a NMFS-approved VMP when directed fishing in a fishery subject to EM coverage.
- § 679.7(k)(1)(i) [Catcher/processors] Permit requirement. Use a catcher/processor to engage in directed fishing for non-CDQ BSAI pollock without a valid AFA catcher/processor permit on board the vessel.
- § 679.20(d)(1)(iii)(B) Retention of incidental species. Except as described in § 679.20(e)(3)(iii) and § 679.20(j), if directed fishing for a target species or species group is prohibited, a vessel may not retain that incidental species in an amount that exceeds the maximum retainable amount, as calculated under paragraphs (e) and (f) of this section, at any time during a fishing trip.

Alternative 5

Expanding the MRA calculation period for Amendment 80 and CDQ groups harvesting Amendment 80 species to an annual basis for BS pollock may introduce enforcement complexities due to the necessity to track basis species throughout the year for calculations of MRAs. For example, OLE would be required to devise entirely unique methods of assessing the vessels' fishing activities, both retention and discard, against FMP areas, federal reporting areas and spatial closures over a period of 12 months, rather than the current state of entry and exit in near real time. These assessments would require personnel who now actively monitor fishing activity with VMS to devote their time to retroactively mapping the activities of these vessels, reducing the capacity to monitor active fleets in real time.

An annual MRA calculation period could make it significantly more difficult to discourage targeting species that are closed to directed fishing in SSL protection areas. Depending on how this is implemented, it may require multiple calculations and detailed review of logbooks. Any annual MRA could further

hamper at-sea enforcement of related closures, gear limitations and restrictions, and license limitation and limited access privilege programs, as any assessment of directed fishing for BS pollock would have to wait until the end of the year. If the Council were to select Alternative 5, OLE notes that IPAs could limit OLE's ability to enforce management measures.

Additionally, enforcement of the same inexhaustive list of prohibitions detailed under Alternative 4 would be similarly impacted by Alternative 5, calculating MRAs, and hence directed fishing, on an annual basis.

Alternative 6

Under the status quo for existing offload-to-offload MRA calculations, MRA violations have occurred (on rare occasions) when unforeseen circumstances resulted in a trip ending prematurely. This is because a vessel may decide to retain a species over the basis species onboard earlier in the trip when compared to vessel behavior operating under an instantaneous MRA. This type of situation could occur more often if additional offload-to-offload MRA calculations are implemented. Alternative 6 explores the idea of providing exemptions from the MRAs in situations when a mechanical, medical, or weather-related emergency ends a trip early.

The Enforcement Committee met on 27 March 2025 and discussed providing exemptions to MRAs when emergency situations occur, noting in its report:

"The Committee recommended the continued exercise of case-by-case discretion by law enforcement officers when vessels report medical and mechanical emergencies. The Committee agreed that vessels could use USCG Form CG-2692, Report of Marine Casualty, to report that a medical or mechanical emergency has occurred, without the need to codify the use of the form. This form is already required to be submitted in prescribed instances of medical or mechanical emergencies on a vessel, and vessels could voluntarily provide a copy of this form to NOAA OLE to support requests for relief from MRA enforcement. The Committee noted that a law enforcement officer could consider any type of contemporaneous, or near-in-time report from the vessel, not just the Report of Marine Casualty. The Committee also recommended that law enforcement officers continue to exercise their discretion on a case-by-case basis when receiving reports of poor weather from vessel operators. Codifying the threshold for a weather emergency to be used for this purpose was not recommended by the Committee. Vessels make their own subjective decisions in the case of inclement weather based on the sea state, operator experience, and vessel size, among many other factors."

OLE is concerned with the portion of Alternative 6 that would add regulatory language to provide an exemption to MRA regulations based on specific weather conditions because:

1. Localized weather conditions are difficult to confirm without independent observations, and hence enforcement fairness would be subjective;
2. This could result in a large number of exemptions being requested because inclement weather is common in the BSAI and GOA management areas; and
3. Specific weather conditions affect the various fleets differently and unequally (different length/sized vessels, different experience levels of captains).

If OLE becomes responsible for administration of weather exemptions, OLE could use its discretion to evaluate the claimed exemption by reviewing the requesting vessel's behavior on previous occasions and by analyzing the fleet's behavior in response to the weather incident.

If the Council wishes to codify exemption request submissions due to weather, OLE suggests that language establishing thresholds (*i.e.*, windspeed and/or sea state) should not be specified in regulatory text.

Based on the low rate of occurrence of weather emergencies, and the near-automated process of detecting and documenting MRA overages, OLE recommends continuing to assess overages on a case-by-case basis.

Due to the verifiable nature of mechanical and medical exemption requests, OLE is not concerned that adding those exemption requests into regulation would result in increasing the risk of misuse of emergency declarations. Nonetheless, enforcement of new codified exemptions for verified/documented emergencies would remain largely unchanged from the status quo case-by-case investigations, as OLE would consider such documented evidence in either scenario, though the administrative burden for the fleet in submitting, and OLE processing, exemption requests would increase if they become regulated.

Additionally, regarding regulatory exemptions as a general matter, the Administrative Conference of the United States (ACUS), a federal executive branch agency that promotes improvements in regulatory programs, issued a recommendation on the use of regulatory exemptions. ACUS recognized that "emergencies or other unforeseen circumstances may . . . render compliance with statutory or regulatory requirements impossible or impracticable" and that strict adherence to regulations may not be desirable where "the recipient of a[n] . . . exemption demonstrates that it intends to engage in conduct that will otherwise further the agency's legitimate goals." On the other hand, ACUS noted that exempting regulated parties can raise "important questions about predictability, fairness, and protection of the public." Therefore, there needs to be a careful balancing of regulatory flexibility and non-arbitrary administration of the law. Furthermore, ACUS indicated that "[w]hen consistent with the statutory scheme, agencies should endeavor to draft regulations so that waivers and exemptions will not be routinely necessary."

Vessels make their own subjective decisions in the case of inclement weather based on the sea state, operator experience, and vessel size, among many other factors.

National Standard 10 – Safety of Life at Sea provides safety considerations for the Agency's and Council's evaluation of management measures. Adverse weather is a constant consideration for vessels operating in the Federally managed fisheries off Alaska and has always been a consideration for vessel operators. National Standard 10 states, "Where these conditions are unavoidable, management measures should mitigate these effects, consistent with the overall management goals of the fishery" (See 50 CFR 600.35(c)(1)). The fishing vessel operator has the ultimate responsibility for the safety of the vessel and persons aboard, including making decisions "to operate safely in a variety of weather and sea conditions."

As a principle of maritime law, the doctrine of good seamanship requires prudent trip planning and consideration of weather conditions by a vessel operator. All vessel operators are universally obligated to use reasonable care and skill in all maritime situations to avoid danger and ensure safety. This is upheld in case law and the International Navigational Rules (COLREGS), Rule 2 ("Nothing in these Rules shall exonerate any vessel, or the owner, master or crew thereof, from the consequences... of the neglect of any precaution which may be required by the ordinary practice of seamen...").

Case law has upheld this doctrine in rulings where circumstances are avoidable by the operator. Assertions of necessity or emergency to excuse a violation where circumstances are avoidable carry little weight (*Crowell*, Nos. 214–095, 214–110, 7 O.R.W. 179, 181-82, 1993 WL 495726, at *2-3 (N.O.A.A. 1993)).

The foregoing principles indicate that any exemption for "poor weather" should be limited to situations that are truly unavoidable despite the operator's exercise of good seamanship.

Granting a broad weather exemption in regulation risks weakening the well-established principle that the vessel operator has an obligation to exercise good seamanship, which includes staying abreast of weather forecasts and avoiding perilous weather systems, and raises other enforcement concerns, as discussed in this section.

If the Council recommends Alternative 6, OLE would support requirements for immediate or close-in-time reporting of the event giving rise to the emergency and for submitting supporting documentation.

Regardless, if Alternative 6 is selected, OLE recommends the following:

- Require that OLE be notified of trip terminations in real time or within 24 hours of trip termination and require that exemption requests be submitted to OLE for approval within 72 hours. *See* 50 C.F.R. § 660.14 as an example.
- OLE suggests that USCG form CG-2692 may be voluntarily submitted to OLE to evidence a medical or mechanical emergency, but should not be required.

5 Environmental Impacts

This chapter evaluates the potential 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 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.[15]

5.1 Methods for Environmental Impact Analysis

5.1.1 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. Environmental analysis for all resource components that overlap with the action area is not needed, as the proposed action is not anticipated to have impacts on every resource component. The effects of the alternatives on the resource components would be caused by any changes in fleet behavior that result from changes to MRAs contemplated by this action. The alternatives do not change the MRA rates or the overall MRA management system. The alternatives under consideration would revise MRA regulations to clarify the definition of a fishing trip, calculations for MRAs, and applications of MRAs (Alternative 2), revise the triggers that end a fishing trip (Alternative 3), add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors (Alternative 4), revise the calculation period for Bering Sea (BS) pollock by Amendment 80 to an annual calculation (Alternative 5), and provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip (Alternative 6). None of the alternatives address fishery allocations, changes in fishery timing or location, how gear is used, or the harvest specification process. Therefore, while the following list of resource components overlap with the action area, no effects are expected as a result of the proposed action on the following resource components:

- Prohibited species;
- Habitat/EFH;
- Marine mammals (excluding SSLs);
- Seabirds;
- Aggregated amounts of non-groundfish species (crab, halibut, salmon, forage fish); and
- BSAI or GOA ecosystems.

As a result, further analysis in this chapter is included only for the following resource components:

- FMP groundfish species; and
- SSLs and their protection areas

5.1.2 Reasonably Foreseeable Environmental Trends and Planned Action in the Area

Each section below provides a review of the relevant environmental trends and planned actions that may result in aggregate effects on the resource components analyzed in this document. This helps explain the

15 *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).

backdrop against which the proposed action is occurring. A more complete review of the actions and environmental trends related to the operation of Alaska groundfish fisheries is described in the prior NEPA documents incorporated by reference (Section 1.4) and the supplemental information report (SIR) NMFS prepares to annually review the latest information since the completion of the Alaska Groundfish Harvest Specifications EIS. Relevant actions are those 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" are generally not included, because they may change substantially or may not be adopted, and so cannot be reasonably described, predicted, or foreseen. Identification of actions likely to impact a resource component within this action's area and time frame will allow the public and Council to make a reasoned choice among alternatives.

5.2 FMP Groundfish Species

Although MRA regulations apply to all Alaska fisheries (groundfish, halibut, and other non-groundfish species), this section focuses on the groundfish fisheries of Alaska because halibut and other non-groundfish species are thought to be minimally impacted because they retain limited amounts of groundfish.

FMP groundfish species potentially affected by this action are the various groundfish species in the BSAI and GOA groundfish fisheries. Section 3.4 provides a discussion of these species. Additionally, Table 3-23 and Table 3-24 provide both target and incidental harvest information with shaded cells representing incidentally caught species by target fishery.

5.2.1 Effects of the Alternatives on FMP Groundfish Species

The effects of the BSAI and GOA groundfish fishery on the various groundfish stocks are assessed annually in the BSAI and GOA SAFE reports (NMFS 2024a). Stock status is assessed annually by NMFS to determine whether overfishing is occurring or if the stocks are in an overfished status and these assessments are reported in the Ecosystem Status Reports for the eastern BS, the AI and the GOA.[16] This information is also available online on the NOAA Fisheries stock status webpage that is updated quarterly.[17] As of September 1st, 2025, none of the BSAI or GOA groundfish stocks are overfished, nor subject to overfishing.

The effects of the alternatives on groundfish species in the BSAI and GOA groundfish fisheries are likely neutral in most cases depending on alternatives and options. Retention of non-target groundfish would likely increase under Alternative 3 and 4, but overall catch (retention plus discards) would likely remain neutral. It is possible that in some scenarios, due to increased retention earlier in a trip, that overall catch could decrease, however this would not be expected to be a large decrease. As a result, the overall impact to the stocks would also likely remain neutral. In general, the potential changes in the stock of incidentally caught groundfish, as a result of the alternatives are not expected to significantly impact these stocks because existing spatial, seasonal, and harvest limit protections would continue. In addition, NMFS would maintain authority to close species to retention if a TAC was reached, thus ending any additional opportunity to retain a species.

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

16 ESRs available at https://www.fisheries.noaa.gov/alaska/ecosystems/ecosystem-status-reports-gulf-alaska-bering-sea-and-aleutian-islands

17 Available at https://www.fisheries.noaa.gov/national/population-assessments/fishery-stock-status-updates

groundfish species though, the greater flexibility to "top off" for a species under Alternative 4 Option 2 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 ex-vessel 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 5-1 provides an overview of each of the species at highest risk of exceeding the ABC and TAC and potentially OFL under Alternative 4, Option 2. Although these species have a higher risk of exceeding ABC, TAC, and OFL than other species, that does not mean the overall risk is necessarily high or certain to happen. Instead, it means that the risk for these species is higher than when compared to other species. In addition, a change to an annual MRA calculation for pollock (i.e., Alternative 5) would provide additional opportunity to top off on pollock early in the year and could potentially result in increased discarding later in the year. This could result in an overall increase of annual pollock harvest if fleet behavior changed significantly. Should this scenario occur, it would be tracked and documented by NMFS inseason management and, if wished, could be reported on during the NMFS inseason management report at the December Council meeting. Furthermore, this scenario is likely constrained by statements made during public testimony (see Section 2.5), which include A80 vessel processing capabilities and ICA Agreements. The Council could consider IPAs or other controls measures to ensure changes in fleet behavior do not result in an increase of annual pollock harvest.

Table 5-1 Groundfish species at highest risk of exceeding ABC and TAC and potentially OFL under Alternative 4, 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 - skates are 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 Eastern GOA. OFL/ABC buffer usually results in about 1,000 mt buffer.	5%	Medium- skates are resilient so PSC is effective in controlling harvest with limited impact to stock
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.

Groundfish species in the BSAI and GOA are rigorously managed under a harvest specification process that includes regularly updated SAFEs using the best available scientific information and peer reviewed by Council's SSC. Therefore, any past or current perturbations that could affect groundfish stock abundance or sustainability have been regularly accounted for within the harvest specification process. Likewise, any future actions taken by the Council would also be bound within the harvest specification process. Foreseeable actions that the Council is contemplating are subarea apportionments, accountability measures, pelagic trawl gear innovations, 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 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 RFA Analysis.

5.3 Steller Sea Lions

As this action could primarily affect the spatial harvest of specific groundfish species, and is not likely to increase overall 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 mammal that meets those criteria is the SSL.

The SSL (*Eumetopias jubatus*) was listed as a threatened species under the ESA on November 26, 1990 (55 FR 49204, November 26, 1990). On May 5, 1997, NMFS reclassified SSL into two distinct population segments (DPSs), with a dividing line at 144°W longitude, based on genetic, morphological, and other information (62 FR 24345, May 05, 1997); at that time, the eastern DPS was listed as threatened and the western DPS was listed as endangered. On November 4, 2013, the eastern DPS of SSL was removed from the endangered species list (78 FR 66140, November 04, 2013). The western DPS (wDPS) of SSL includes animals born west of Cape Suckling, Alaska (144° W; 62 FR 24345, May 5, 1997). The two Steller sea lion DPSs meet the requirements of the 1996 policy (61 FR 4722, February 7, 1996) for discreteness and significance. The loss of any one DPS would result in a significant gap in the range of the species and loss of adaptive characteristics unique to the DPS. Although recent data indicate that a relatively low level of genetic interchange occurs between the Eastern DPS and Western DPS, concentrated in northern Southeast Alaska, evidence does not indicate that the rate of exchange has been sufficient to diminish the genetic distinctiveness between the two distinct population segments (Figure 5-1) (Jemison et al. 2013, O'Corry-Crowe et al. 2014, Jemison et al. 2018, Rehberg et al. 2018).

Most adult SSLs 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). SSLs disperse widely after the breeding season (i.e., late May to July), likely to access seasonally important prey resources. During fall and winter many SSLs disperse from rookeries and increase use of haulouts, particularly on terrestrial sites but also on sea ice in the BS (Calkins 1998; Sinclair et al. 2019).

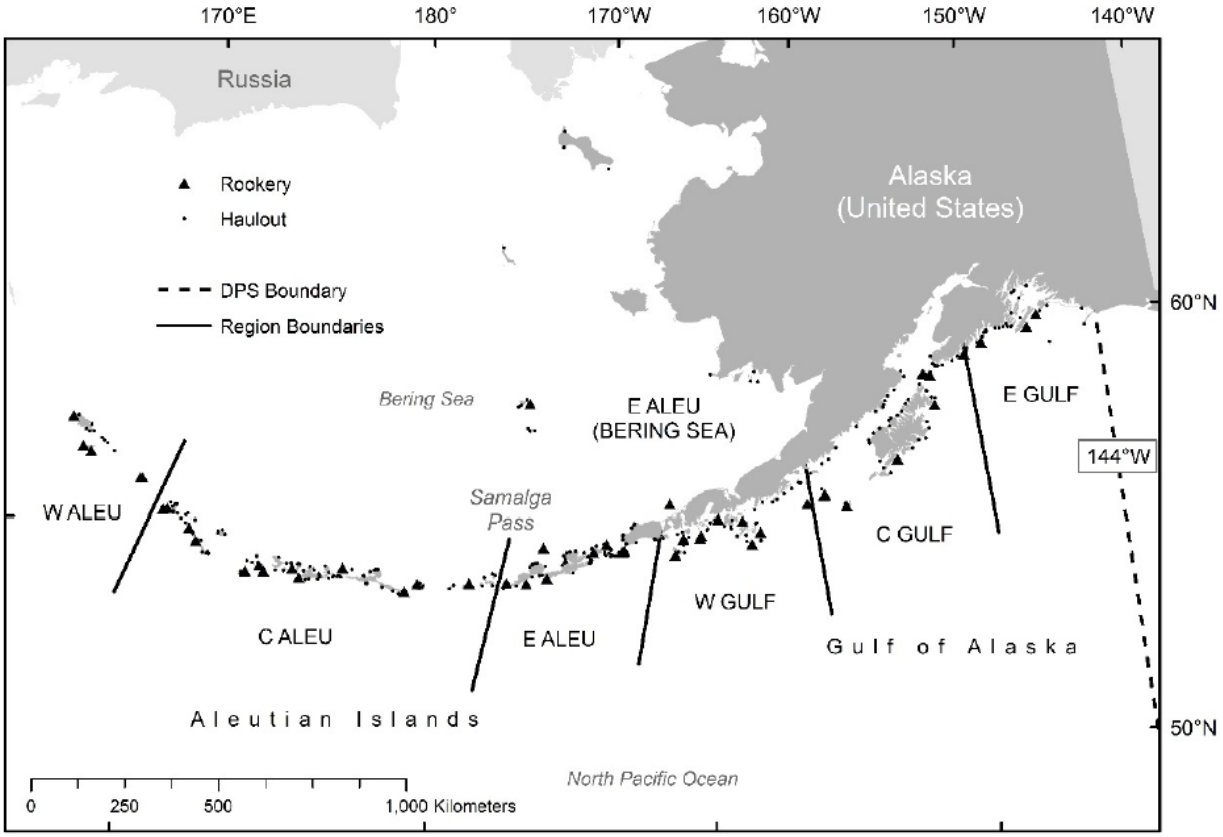


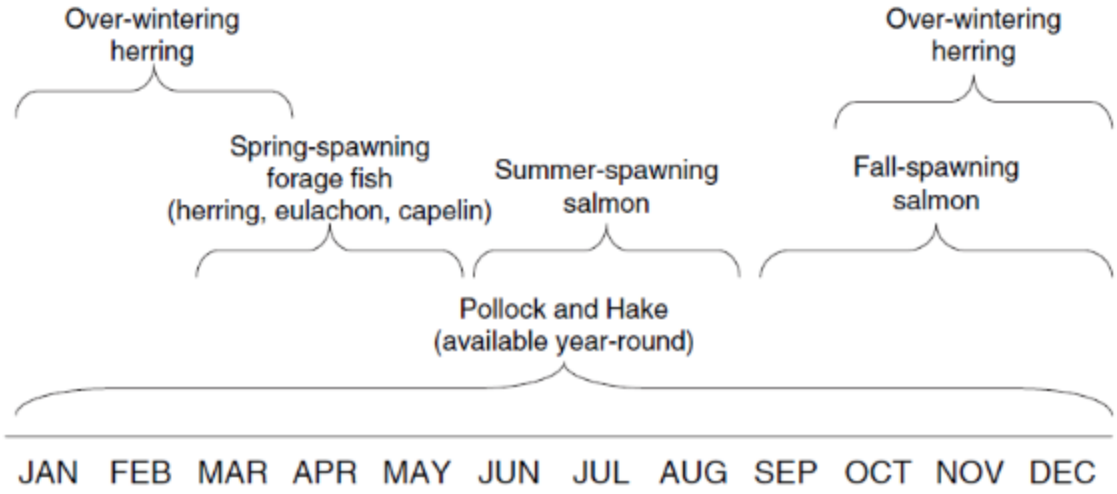
Table 5-2 SSL rookeries (triangles), haulouts (dots), the line at 144 West longitude that separates the eastern and western DPSs (dotted line). In addition, regions of Alaska used for Western Steller sea lion population trend estimation. E GULF, C GULF, and W GULF are eastern, central, and western Gulf of Alaska regions, respectively. E ALEU, C ALEU, and W ALEU are eastern, central, and western Aleutian Islands regions, respectively. Source: Adaptation from AFSC-MML-Alaska Ecosystems Program 2016. The regional boundary lines and the DPS boundary do not align with NMFS reporting areas nor do the naming conventions align completely (see Figure 1-1).

During summer, SSLs 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 SSLs is strongly influenced by seasonality of sea lion reproductive activities on rookeries and the ephemeral nature of many prey species (Figure 5-2). Overall, available data suggest distribution at sea by SSL 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. SSLs appear to have a narrow margin for energy balance during early lactation (mid-May to mid-July); any reduction in the size or abundance of prey could have serious consequences for reproductive success and fitness (Olivier et al. 2022). Models comparing SSL population change to accessible prey biomass in the 2000s found that sea lion populations increased with increasing prey accessibility (Hui et al. 2015). Olivier et al. (2022) reported that a 10% to 20% reduction in the size or abundance of Western DPS SSL adult female

prey would result in a 38% to 76% reduction in milk production, which would cause reduced growth or death of a pup.

SSLs consume a variety of demersal, semi-demersal, and pelagic prey. The SSL Recovery Plan (NMFS 2008) ranked competition with fisheries for prey as a potentially high threat to the recovery of the wDPS SSL. Commercial fisheries target several important SSL prey species including Pacific cod, Atka mackerel, and pollock. Other primary prey items include eulachon, herring, salmon, Pacific cod, Atka mackerel, pollock, and squid.

Table 5-3 Seasonal foraging ecology of Steller sea lions. Source: Adapted from Womble et al. 2009



Threats to the wDPS SSL 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 SSL biology, status, and threats is available at:

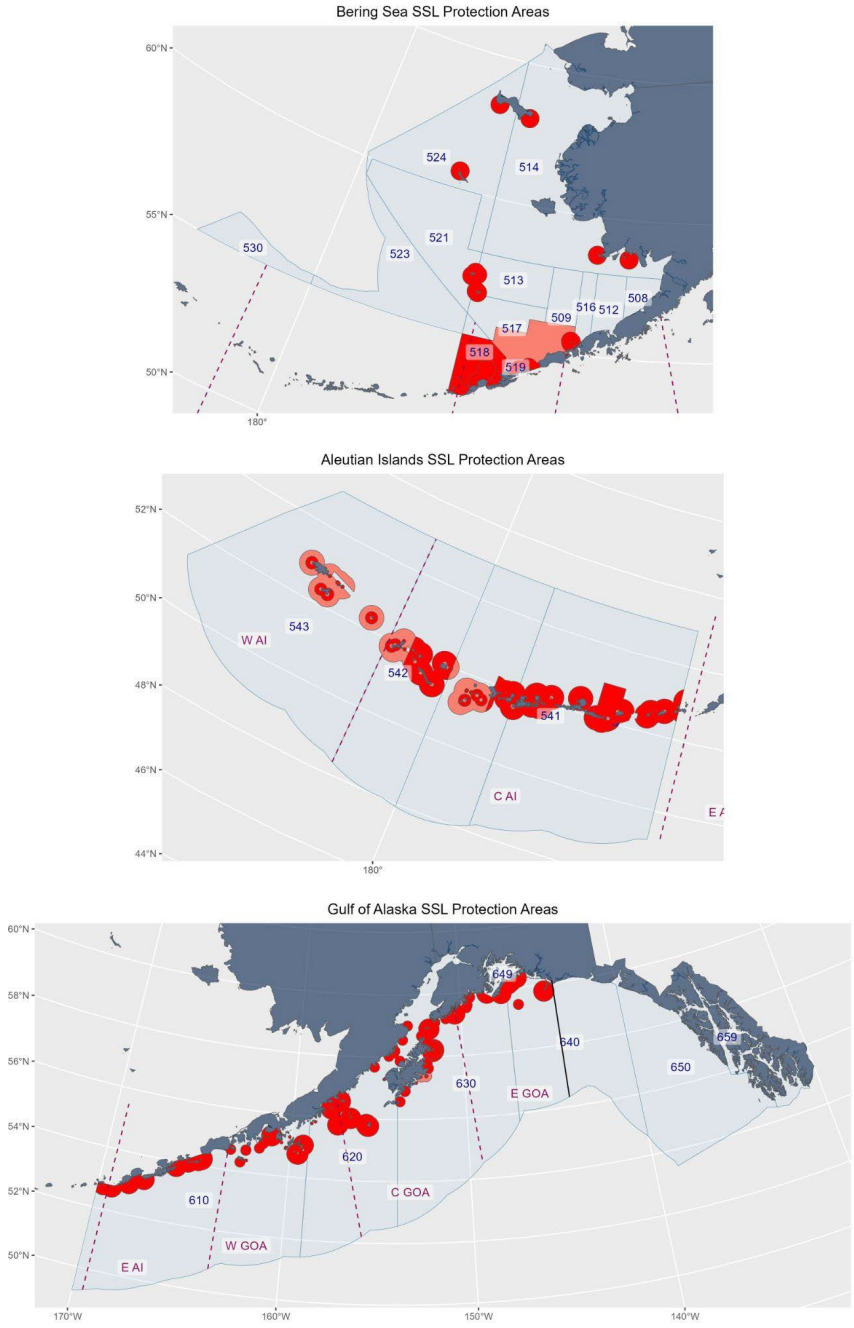
- NOAA Fisheries Species Directory, Steller Sea Lion Species Description.
- NOAA Fisheries Marine Mammal Stock Assessment Reports: Pinnipeds-Otariids.
- NMFS Protected Resources Division, 5-Year Review for Western Distinct Population Segment SSL, 2020.

5.3.1 SSL Protections Measures

To protect SSLs from potential competition for prey, NMFS has closed areas around specific SSL rookeries and important haulouts to directed commercial fishing for certain prey species. In addition to conserving prey for SSLs, 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 SSL prey species is low, additional controls are applied to the annual catch limits to ensure that prey remain available for SSLs. NMFS has also imposed seasonal limits on catch of SSL prey and limits on catch of these species inside of SSL critical habitat. SSL protection measures are integrated throughout the regulations for the Fisheries of the EEZ off Alaska at 50 CFR Part 679, are summarized below, and depicted in Figure 5-3 for trawl gear.[18]

18 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.

Table 5-4 **Steller Sea Lion Protection Areas for vessels using trawl gear in the Bering Sea, Aleutian Islands, and the Gulf of Alaska. Protection areas for vessels using trawl gear as described in 50 CFR 679.22(a)(7) and (8), 679.22(b)(2), and Tables 4, 5, and 6 to part 679 are aggregated for all SSL prey species (Atka mackerel, Pacific cod, pollock) and are shown in red except for Atka Mackerel directing fishing closures in the Bering Sea and Gulf of Alaska. The dark red color indicates more than one protection area for a prey species overlaps. The light red color indicates that only one protection area for a prey species is present. NMFS reporting areas are shown in light blue. Regional boundary lines as described in Figure 5 of the 2023 Stock Assessment Report and Figure 5-1 of this analysis are shown as dark pink dashed lines and labeled on the figure for clarity. The SSL DPS boundary is denoted as a solid black line. The spatial boundary of each figure is determined by the extent of the area. The regional boundary lines and the DPS boundary do not align with NMFS reporting areas nor do the naming conventions align completely.**



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 SSL 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.[19]

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

Gulf of Alaska Regulations for SSL Protection Areas

Regulations at 50 CFR 679.22(b)(2)(i) close areas in the GOA to groundfish fishing within three nautical miles of selected sites in order to protect SSLs and their prey. These areas are 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) prohibit directed fishing for pollock by vessels with a Federal Fisheries Permit within pollock no-fishing zones around selected sites listed in Table 4 to 50 CFR Part 679.

Regulations at 50 CFR 679.22(b)(2)(iii) prohibit directed fishing for Pacific cod by vessels named on a Federal Fisheries Permit and using trawl, HAL, or pot gear in the federally managed Pacific cod or State of Alaska parallel groundfish fisheries, as defined in Alaska Administrative Code (5 AAC 28.087(c)), within Pacific cod no-fishing zones around selected sites. These sites and gear types are listed in Table 5 to 50 CFR Part 679.

Regulations at 50 CFR 679.22(b)(2)(iv) prohibit directed fishing for Atka mackerel by vessels named on a Federal Fisheries Permit within the GOA subarea at all times.

Bering Sea Regulations for SSL Protection Areas

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 BS 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

19 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.

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.

SSL conservation area (SCA): Directed fishing for pollock by vessels catching pollock for processing by the inshore component, C/Ps 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 for SSL Protection Areas

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, HAL, 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.

5.3.2 Rulemaking Timeline of Major SSL Protection Measures

- **1972** End Commercial Harvest of SSL
- **1990** SSL Added as Threatened to ESA - 55 FR 49204
- **1991** Amds14/19 Prevent Pollock Roe Stripping/Seasonally Allocate Pollock TAC - 56 FR 0492
- **1992** Amds 20/25 No Trawl Zones - 57 FR 2683
- **1993** Expand No Trawl Zones - 58 FR 13561
- **1996** Pollock Trimester Allowances - 61 FR 27308
- **1998** Amds 36/39 Establish Forage Fish Category - 63 FR 13009
- **1998** Pollock TAC Setting - 63 FR 31939
- **1999** Season and Area Apportionment of Atka Mackerel Total Allowable Catch - 64 FR 3446
- **2000** Removal of Trawl Closure, Creation of Area Closed to Fishing - 65 FR 79784
- **2000** Pacific Cod Adjustment to Closure Area - 65 FR 82298
- **2001** SSL Protection Measure for Groundfish Fisheries - 66 FR 17087
- **2002** SSL Protection Measure for Groundfish Fisheries 2002 Harvest Specs - 67 FR 64315

- **2003** SSL Protections Measures - 68 FR 204
- **2004** Removal of Atka Mackerel Harvest Restriction - 69 FR 51191
- **2004** Revision of SSL Protection Measures for Pollock/Pacific Cod in GOA - 69 FR 75865
- **2011** Interim SSL Measures for BSAI and GOA - 75 FR 77535
- **2014** SSL Protection Measures for the BSAI Groundfish Fisheries Off Alaska - 79 FR 70285

5.3.3 SSL Population Trends Since Implementation of Protection Measures

The wDPS SSL population declined precipitously from 1970 to the early 2000s and has never recovered to pre-ESA listing levels (Figure 5-4). The population increased as a whole from the early 2000's through 2024 but recent model results suggest that between 2010 and 2025 the wDPS SSL non-pups were statistically stable (0.62% y^{-1}; 95% confidence interval [CI]: -0.05-1.30) (Sweeney et al 2025b *in review*). This is the first time the wDPS non-ups have been stable since the population began to rebound in the early 2000's. Pup counts increased 0.69% y-1 (95% CI: 0.10–1.29) from 2010 to 2025, though also appear to be approaching stable. Non-pups (-5.35% y-1) and pups (-4.34% y-1) in the western Aleutian Islands region continued to decline significantly from 2010 to 2025 while the central Aleutian Islands region remained stable (Figure 5-5). Uncertainty in estimates for the central Aleutian Islands region remains high because of lower survey coverage since 2018. Realized non-pup and pup counts in the western and central Aleutian Islands regions have declined over 97% and 85% (respectively) since the 1970s. The eastern Aleutian Islands region (only one site surveyed in 2025) significantly increased for non-pups (2.36 % y-1) and pups (1.69 % y-1). From 2009 to 2024 (no survey in these regions in 2025), the western Gulf of Alaska region's non-pups were stable while the central region significantly increased 2.52% y-1 (95% CI 1.48–3.59% y-1; Sweeney et al. 2025a). The eastern Gulf of Alaska region's non-pups significantly declined from 2009 to 2024 (-1.88% y-1, 95% CI -3.78– -0.11% y-1). Pups in the western (1.27%y-1) and central (1.46%y-1) Gulf of Alaska regions increased significantly while the eastern Gulf region was stable. For clarity on overlap between NMFS reporting areas and SSL regions, the western Aleutian Islands SSL region overlaps with area 543, areas 541 and 542 comprise the SSL central Aleutian Island region and the eastern Aleutian Islands SSL region overlaps with area 610 (Figure 5-3).

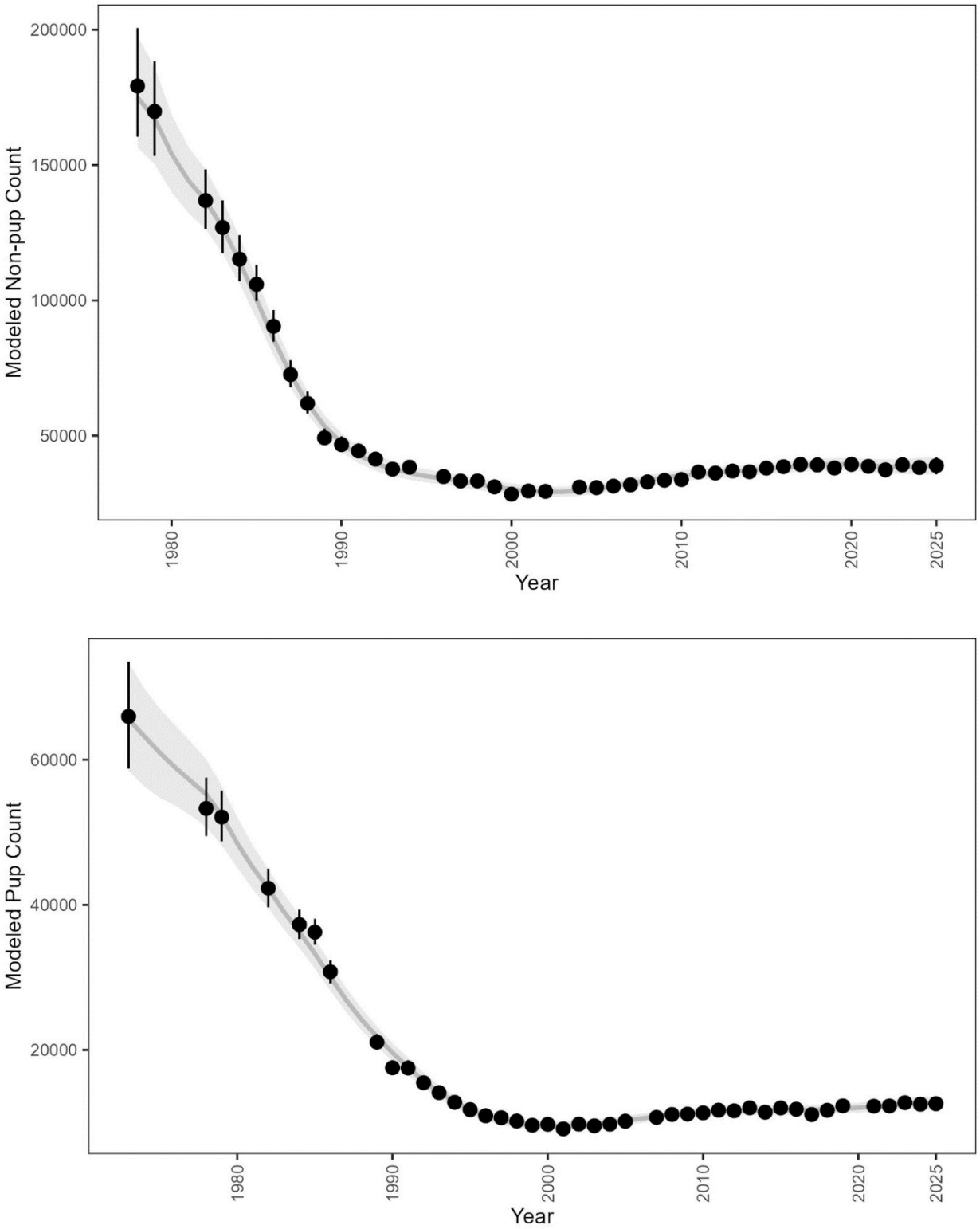


Table 5-5 Realized and predicted counts of Steller sea lion non-pups (top) and pups (bottom) in the Western stock in Alaska, 1978 for non-pups and 1973 for pups to 2025. Realized counts are represented by points and vertical lines (95% credible intervals). Predicted counts are represented by the dark gray line surrounded by the lighter gray 95% credible interval (Sweeney et al. 2025b *in review*).

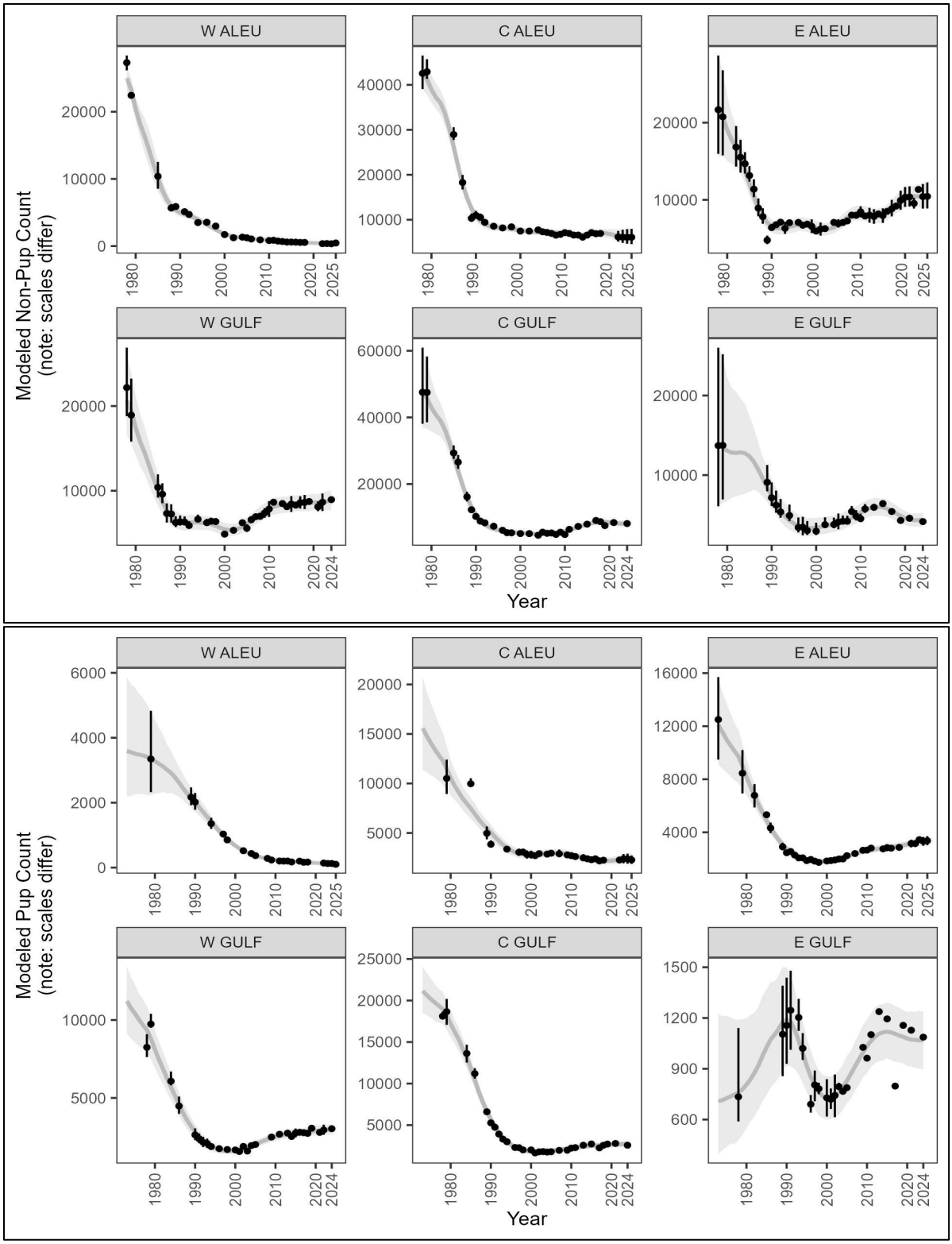


Table 5-6 Realized and predicted counts of Steller sea lion non-pups (top) and pups (bottom) in the six regions that compose the Western stock in Alaska, 1978 for non-pups and 1973 for pups to 2024 for the western (W), central (C), and eastern (E) Gulf of Alaska (GULF) regions and 2025 for Aleutian Island (ALEU) regions. Realized counts are represented by points and vertical lines (95% credible intervals). Predicted counts are represented by the dark gray line surrounded by the lighter gray 95% credible interval (Sweeney et al. 2025a, 2025b in review).

5.3.4 Catch History of SSL Preferred Prey

To better characterize how the proposed action may affect the availability of SSL prey, a look at SSL prey catch across time and area, with specific attention to fishing trends before and after both MRA and SSL protection measures were enacted is useful. Trends before and after the 2014 SSL protection measures (see Section 5.3.2 for SSL protection measure timeline) and the 2004 and 2014 MRA adjustments that changed from instantaneous MRA calculation to time of offload for BSAI pollock and BS Atka mackerel non-AFA vessels, respectively, will be highlighted to understand SSL protections measures in the context of catch over time and if MRA adjustments have a history of altering vessel fishing behavior.

All Trawl Catch

While SSL protection measures are in effect for trawl, hook-and-line, and pot gear, this section focuses only on trawl catch around and in SSL protection areas as vessels using trawl gear comprise a majority of catch for preferred prey species in these areas, have a history of topping off, and have had previous MRA adjustments implemented.

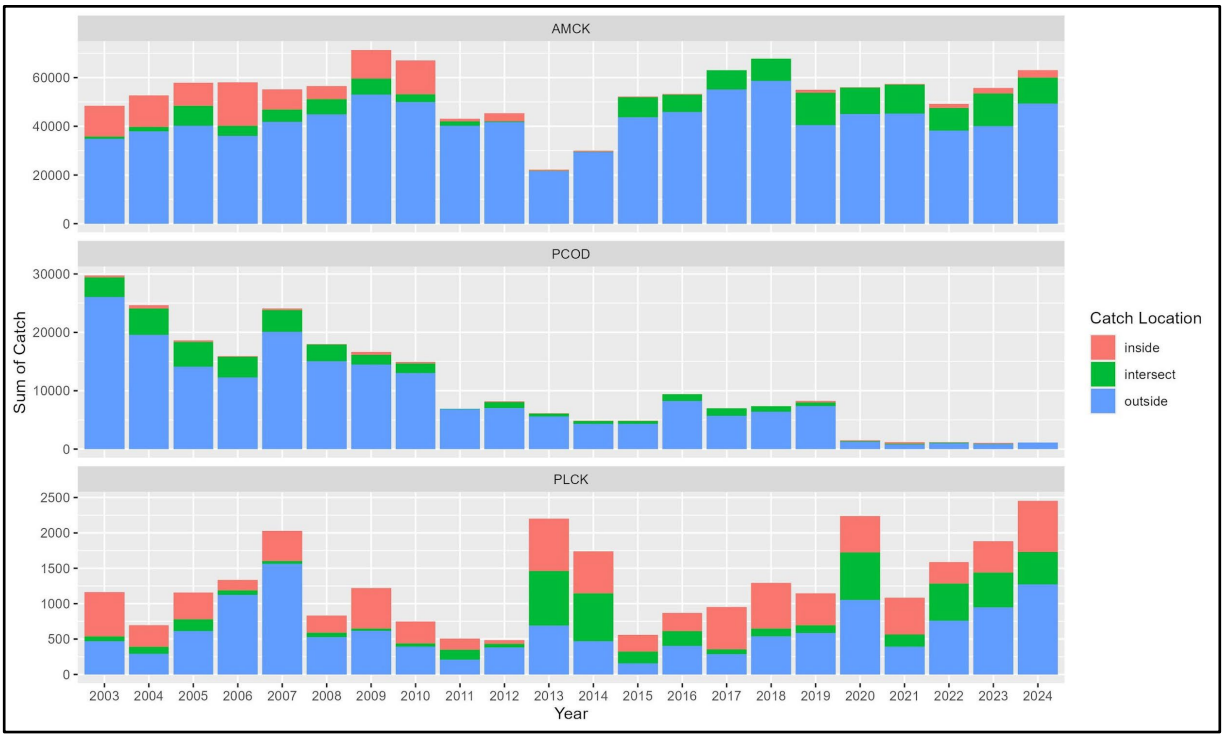
Figure 5-6, Figure 5-7, and Figure 5-8 summarize all non-pelagic and pelagic trawl catch from 2003 to 2024 within, outside, and intersecting the SSL protection areas specific to each prey species (pollock, Pacific cod, Atka mackerel) by area (AI, BS, GOA). The SSL protection areas are described in regulation at § 679.22 and in Tables 4, 5, 6, and 12 to part 679 and differ by prey species and gear type. The spatial differences in closure areas by prey species and for trawl gear only were accounted for in this request. All catch is reported in metric tons.

The Catch in Areas (CIA) Database was used to query catch data for non-pelagic and pelagic trawl catch. Catch data were aggregated within an 8-kilometer hexagon area. This CIA dataset is the post-facto product from the aggregation process to accommodate confidentiality concerns and to provide a better spatial scale than ADF&G statistical areas. The database overlays a hex grid onto the vessel track lines that are constructed using VMS data. Reported catch is attributed to those subsections of the vessel trackline which represent fishing behavior (i.e., fishing tracklines) and does not attribute catch to transit tracklines. Fishing and transit behavior is inferred based on vessel speed. The total catch associated with each fishing trackline is then distributed to those hexagon areas where the line overlaps, proportional to the percentage of the total line length which falls within the cell. This data does not differentiate by trip target, only species caught.

Catch is distributed proportionally along fishing tracklines, which creates potential for overestimation within hexagons that overlap SSL protection areas. For example, if a trackline passes only briefly through a specific area, a portion of the haul is still allocated there even if most catch occurred elsewhere. Intersecting cells may also receive inflated estimates since allocation is based on line length rather than haul start and end points. Precision differs by fleet and data source. C/Ps, with more consistent observer coverage, allow catch to be attributed more accurately to specific hauls and locations, while CVs rely more on fish tickets, which record landings by statistical area and introduce uncertainty when mapping catch to VMS-derived tracklines, particularly for trips covering multiple areas or targets. Observer data provide the highest spatial precision because catch is recorded at the haul level and VMS data are tied directly to observed positions, while fish tickets, though comprehensive for landings, aggregate catch at broader scales and may not align well with actual fishing effort. As a result, CIA estimates should be interpreted as approximate distributions of catch activity rather than precise locations of removal, with greater risk of overestimation in boundary areas such as SSL protection areas.

Catch data were split into the three categories of within, outside, and intersecting SSL protection areas by the following conditions:

1. Catch inside: if the hexagon was completely within the area of the SSL protection area for a given prey species caught then it was categorized as “inside”
2. Catch outside: if the hexagon was completely outside of the area of the SSL protection area for a given prey species caught then it was categorized as “outside”
3. Catch intersecting: if the hexagon intersected the line of the SSL protection areas for a given prey species caught then it was categorized as “intersect”. Caveat: For 8 km hexagons that intersect an SSL protection area, this method does not assign inside or outside. Vessels may fish up to the line but there is not a reasonable method to determine if a vessel fished within a protection area for a haul that intersects the outside of the SSL protection area for this scale of analysis. As such, the figures generated for this analysis are an estimation of fishing behavior.



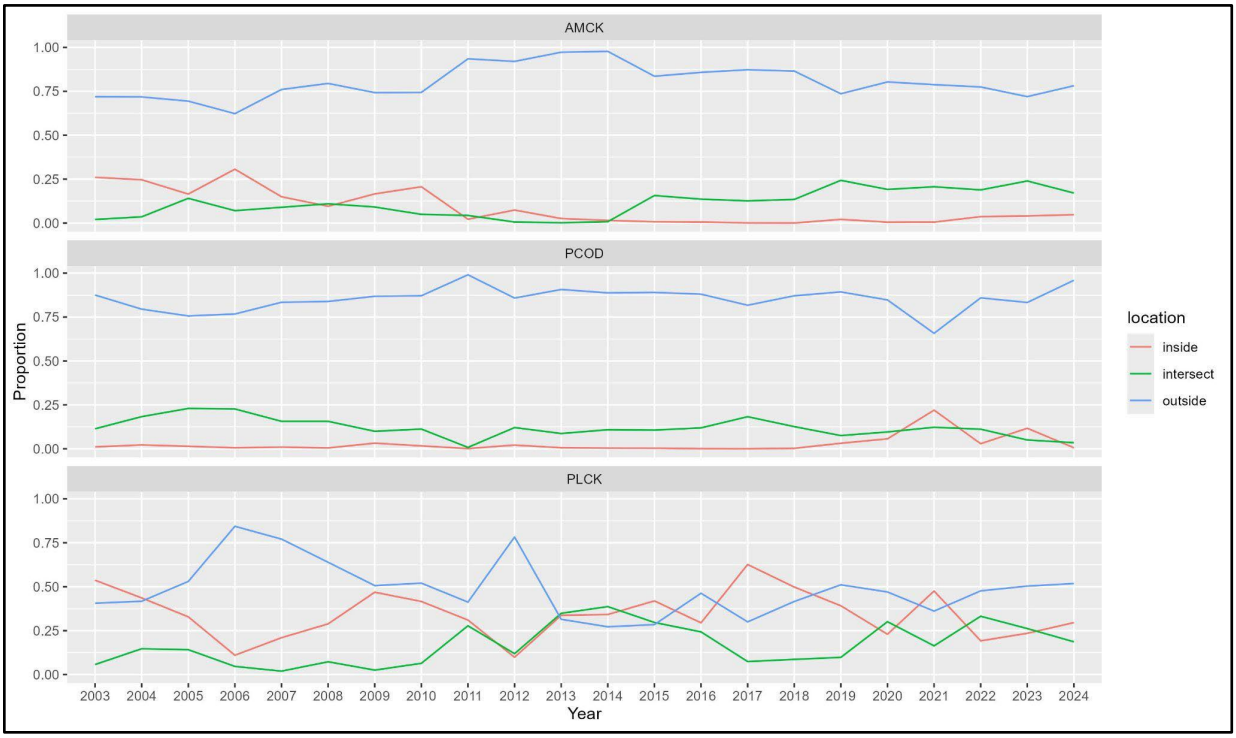


Table 5-7 Aleutian Islands trawl total catch (mt) and proportion of catch by SSL prey species. Data are subset by catch location inside, intersect, and outside. Years: 2003-2024. Data were reviewed for confidentiality.

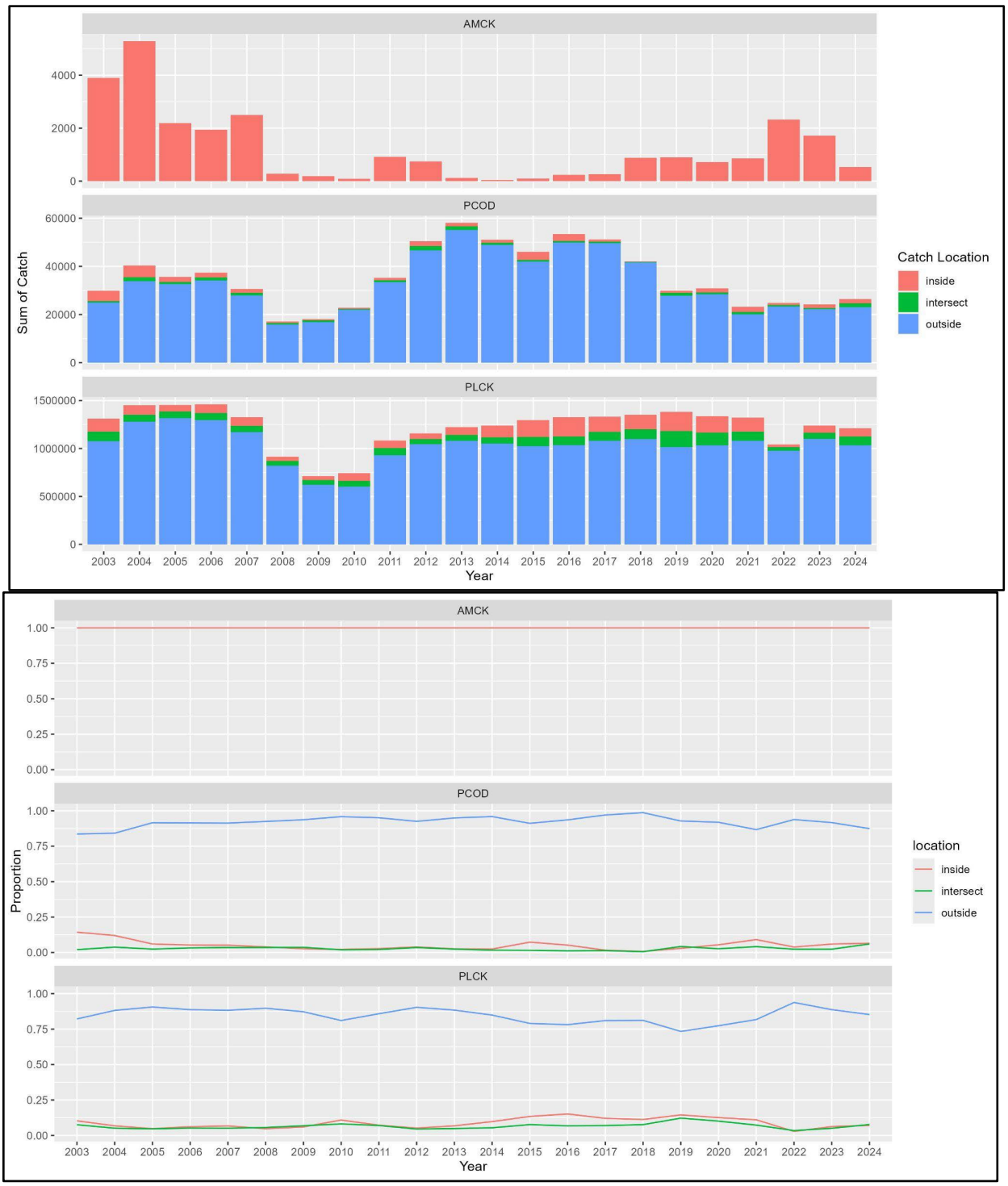
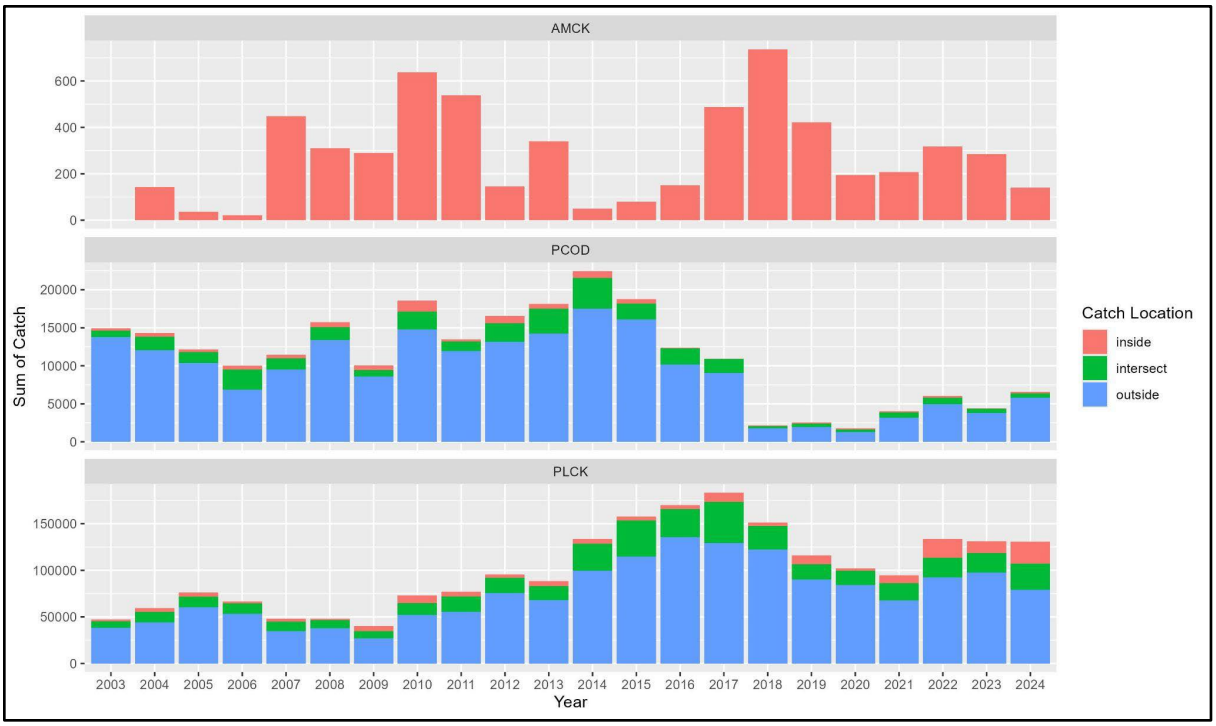


Table 5-8 **Bering Sea trawl total catch (mt) and proportion of catch by SSL prey species. Data are subset by catch location inside, intersect, and outside. Years: 2003-2024. Note: the Bering Sea is closed to directed fishing for Atka mackerel so all catch is denoted as "inside." Any pollock catch that occurred within the SCA was considered "outside" the SSL protection areas because this closure applies to vessels that are directed fishing for pollock and these trips were excluded from the inside totals. The BS pollock restriction area is closed to directed fishing for pollock in the A season, but open in the B season. However, for the purposes of this figure, any pollock catch within the BS pollock restriction area, A or B season, was considered "inside" SSL protection areas. Data were reviewed for confidentiality.**



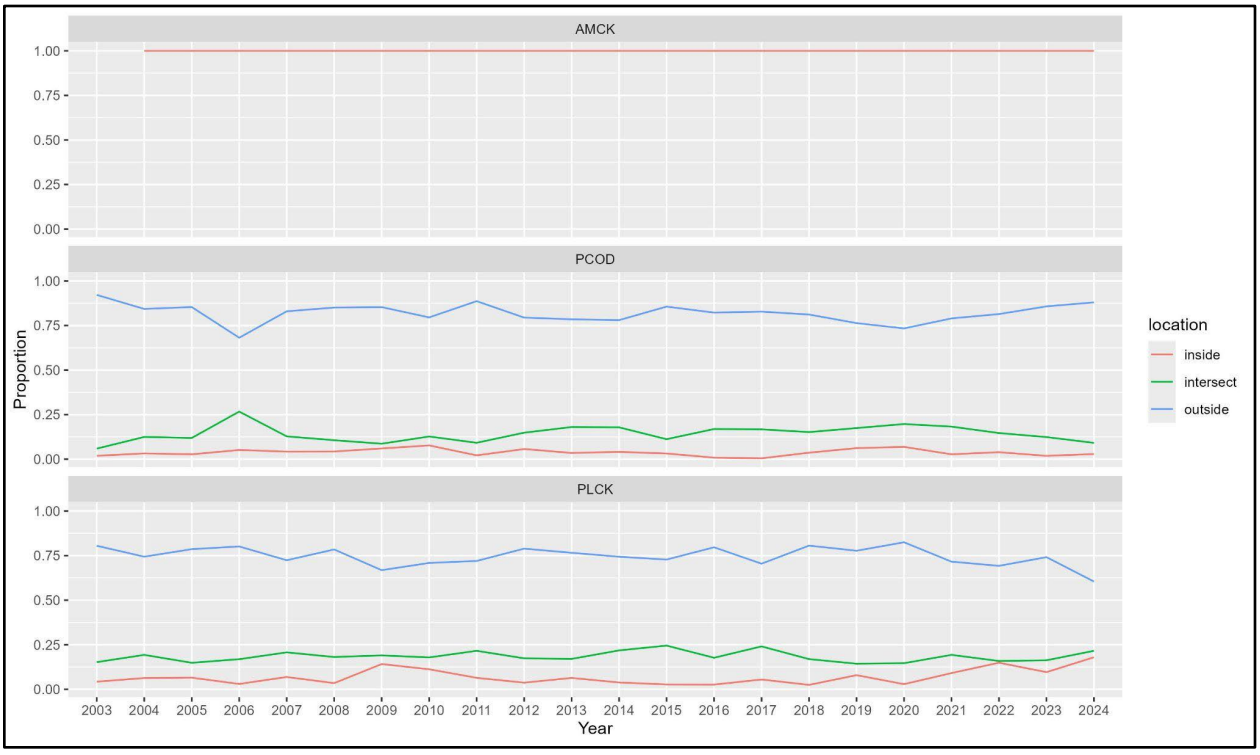


Table 5-9 **Gulf of Alaska trawl total catch (mt) and proportion of catch by SSL prey species. Data are subset by catch location inside, intersect, and outside. Years: 2003-2024. Note: the Gulf of Alaska is closed to directed fishing for Atka mackerel so all catch is denoted as "inside." Data were reviewed for confidentiality.**

Amendment 80 and CDQ Catch

As described in Appendix 4, the A80 and CDQ sectors while fishing A80 species were identified as sectors that could potentially increase "topping off" behavior as a result of the proposed Alternatives 3 and 4. Therefore, in order to understand how the action might affect localized prey of SSL, this section of the analysis hones in on those sectors.

Figure 5-9, Figure 5-10, Figure 5-11, Figure 5-13, and Figure 5-14 summarize TAC, all trawl catch for Pacific cod and pollock, and catch within SSL protection areas from 2003 to 2024 for **Amendment 80 and CDQ vessels when not participating in the directed pollock fishery.** Figure 5-12 summarizes TAC and all trawl catch and does not differentiate by program. All figures utilize catch data from the CIA. Figures that summarize A80/CDQ catch join A80/CDQ vessel IDs for all targets. Data excluded: "P" and "B" target when pollock was caught in the Bering Sea because directed pollock catch is coded as "P" if retained pollock is 95% or greater and the target is pollock and coded as "B" if retained pollock is 95% or less and the target is pollock. In these cases, vessels that were coded as A80 or CDQ that were targeting pollock at the trip level were excluded because this would have captured CDQ vessels participating in the pollock fishery. This narrowed the scope of trips to all trips with either an A80/CDQ management program code without a "P" or "B" target.

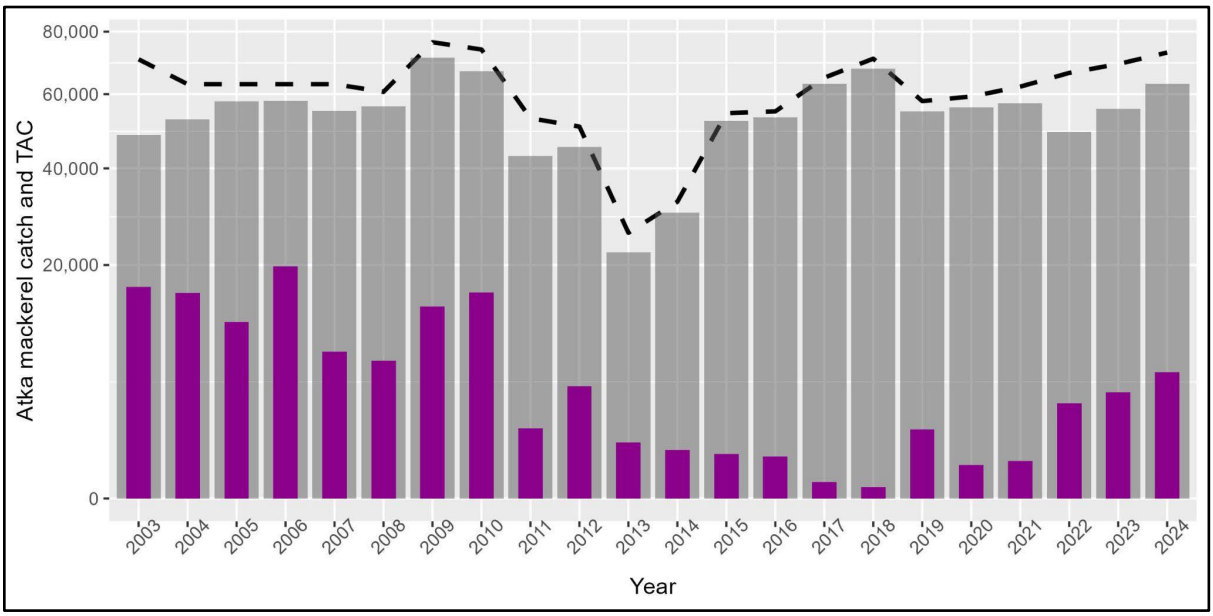


Table 5-10 Aleutian Islands Atka mackerel TAC for all gear types (dashed black line), total catch (mt) for all vessels using trawl gear (grey bars), and catch (mt) inside SSL protection areas by A80/CDQ vessels exclusively (purple bars), 2003-2024.

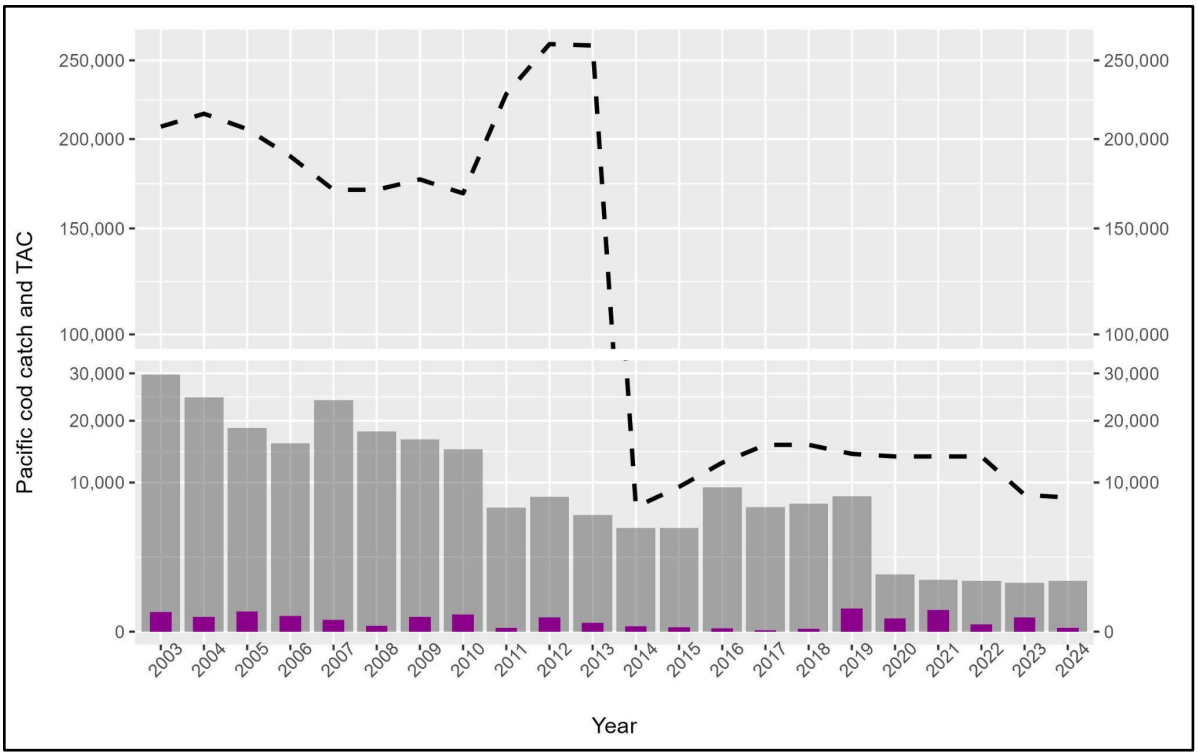


Table 5-11 Aleutian Islands Pacific cod TAC for all gear types (dashed black line), total catch (mt) for all vessels using trawl gear (grey bars), and catch (mt) inside SSL protection areas by A80/CDQ Vessels exclusively (purple bars), 2003-2024. Note: the TAC was specified at the BSAI level until 2014 when Pacific cod was specified separately in the BS and AI. The y-axis breaks at 30,000 and 100,000 to visually capture the differences between the TAC set before and after the split.

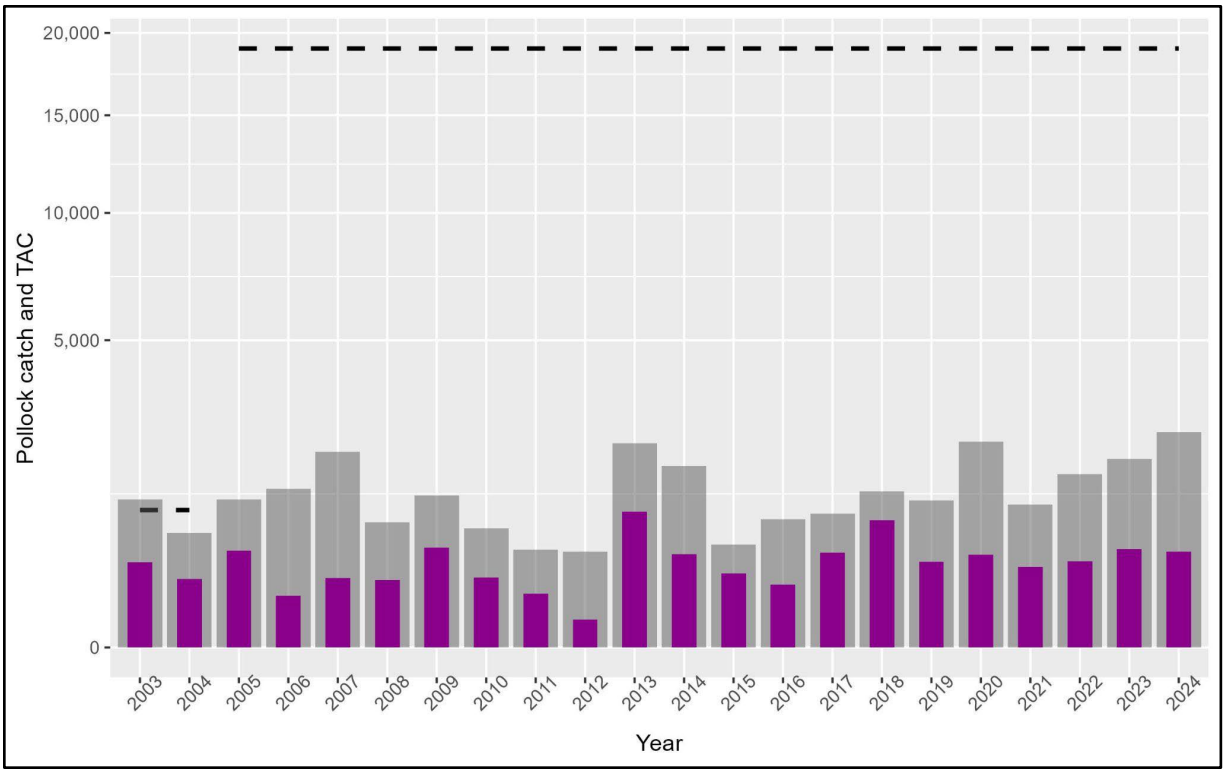


Table 5-12 Aleutian Islands pollock TAC for all gear types (dashed black line), total catch (mt) for all vessels using trawl gear (grey bars), and catch (mt) inside SSL protection areas by A80/CDQ Vessels exclusively (purple bars), 2003-2024.

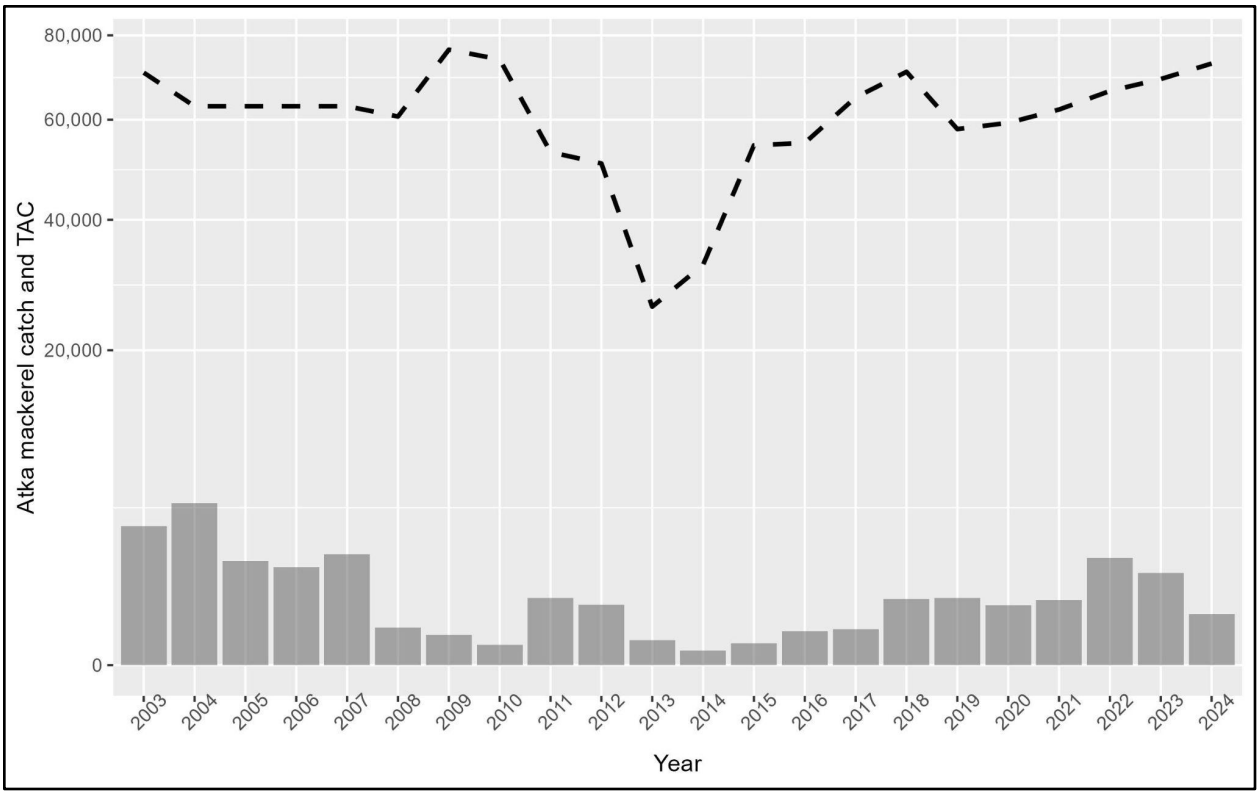


Table 5-13 **Bering Sea Atka mackerel TAC for all gear types (dashed black line) and total catch (mt) for all vessels using trawl gear (grey bars), 2003-2024. Directed fishing for Atka mackerel using trawl gear is prohibited in the Bering Sea (50 CFR 679.22(a)(7)(vi)). Consequently, all trawl catch occurred in other directed fisheries.**

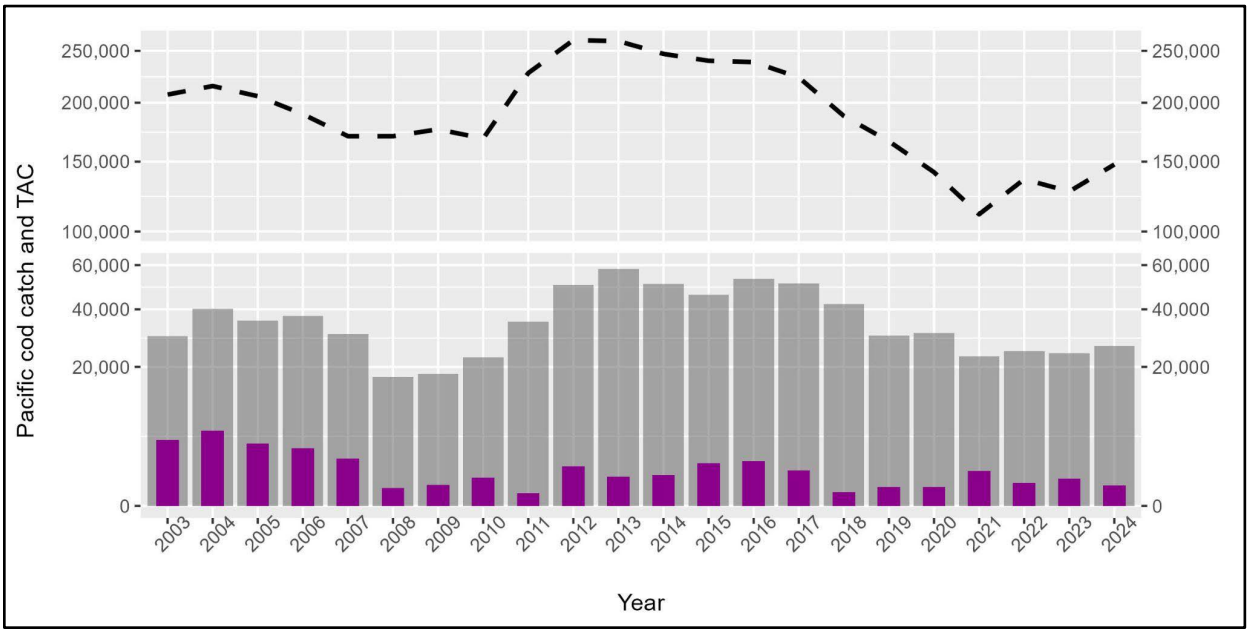


Table 5-14 **Bering Sea Pacific cod TAC for all gear types (dashed black line), total catch (mt) for all vessels using trawl gear (grey bars), and catch (mt) inside SSL protection areas by A80/CDQ Vessels exclusively (purple bars), 2003-2024. Note: the TAC was specified at the BSAI level until 2014 when Pacific cod was specified separately in the BS and AI. The y-axis breaks at 60,000 and 100,000 to visually capture interannual variation in the catch inside SSL protection areas by A80/CDQ vessels.**

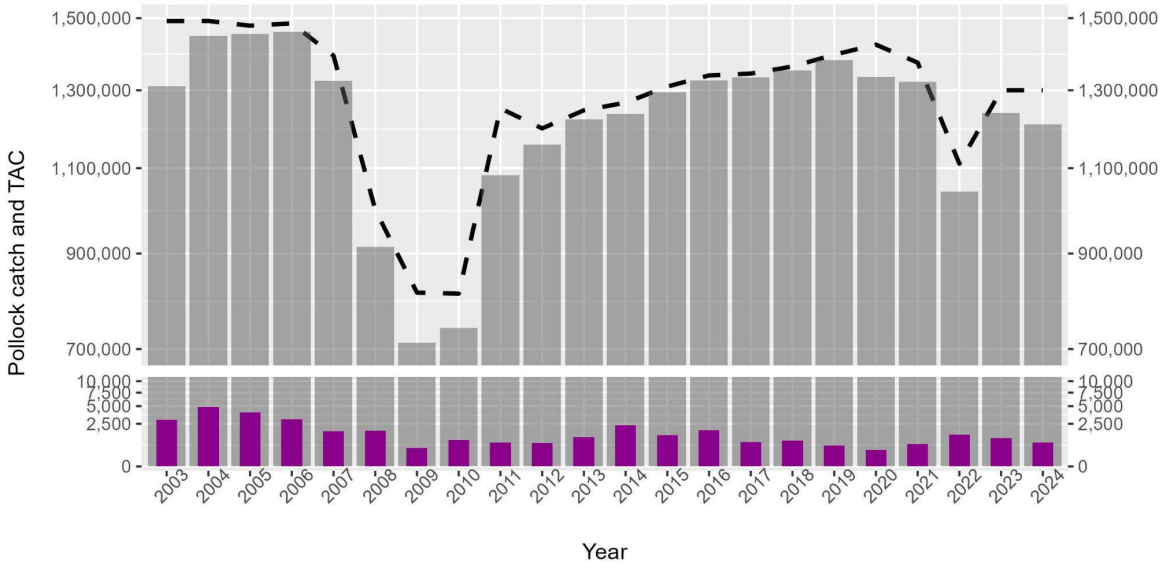


Table 5-15 Bering Sea pollock TAC for all gear types (dashed black line), total catch (mt) for all vessels using trawl gear (grey bars), and catch (mt) inside SSL protection areas by A80/CDQ Vessels exclusively (purple bars), 2003-2024. Note: y-axis break at 10,000 and 700,000 to visually capture interannual variation in the catch inside SSL protection areas by A80/CDQ vessels. The Steller sea lion conservation area (SCA) was excluded from SSL protection areas for this analysis. Any pollock catch that occurred within the SCA was considered "outside" the SSL protection areas because this closure applies to vessels that are directed fishing for pollock and these trips were excluded from the inside totals. The BS pollock restriction area is closed to directed fishing for pollock in the A season, but open in the B season. However, for the purposes of this figure, any pollock catch within the BS pollock restriction area, A or B season, was considered "inside" SSL protection areas.

Gulf of Alaska

Figure 5-15 summarizes trawl catch. Figure 5-16 and Figure 5-17 summarize TAC, all trawl catch, and catch within SSL protection areas from 2003 to 2024 utilizing catch data from the CIA and vessel information from the CAS. This data does not differentiate sectors as the data did for Figure 5-9 through Figure 5-13.

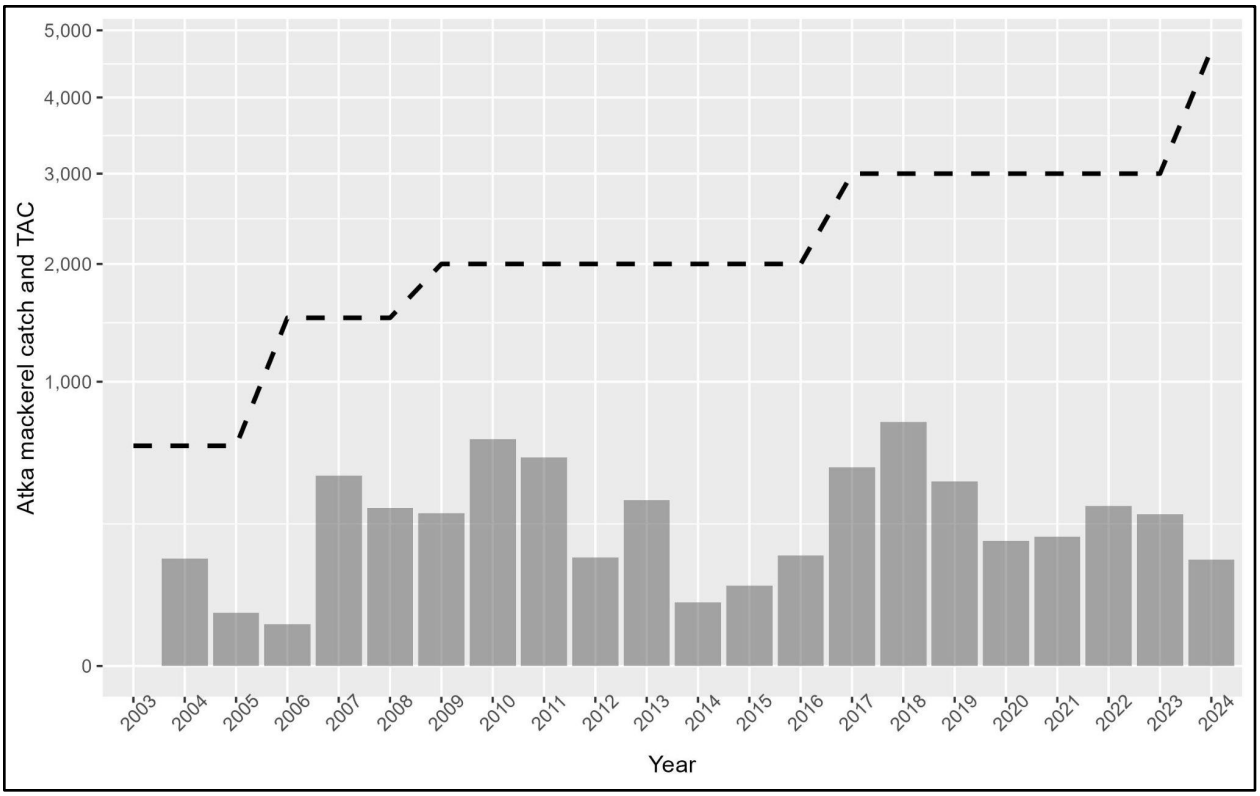


Table 5-16 Gulf of Alaska Atka mackerel TAC for all gear types (dashed black line) and total catch (mt) for all vessels using trawl gear (grey bars), 2003-2024. Directed fishing for Atka mackerel using trawl gear is prohibited in the Gulf of Alaska (679.22(b)(2)(iv)). Consequently, all trawl catch occurred in other directed fisheries.

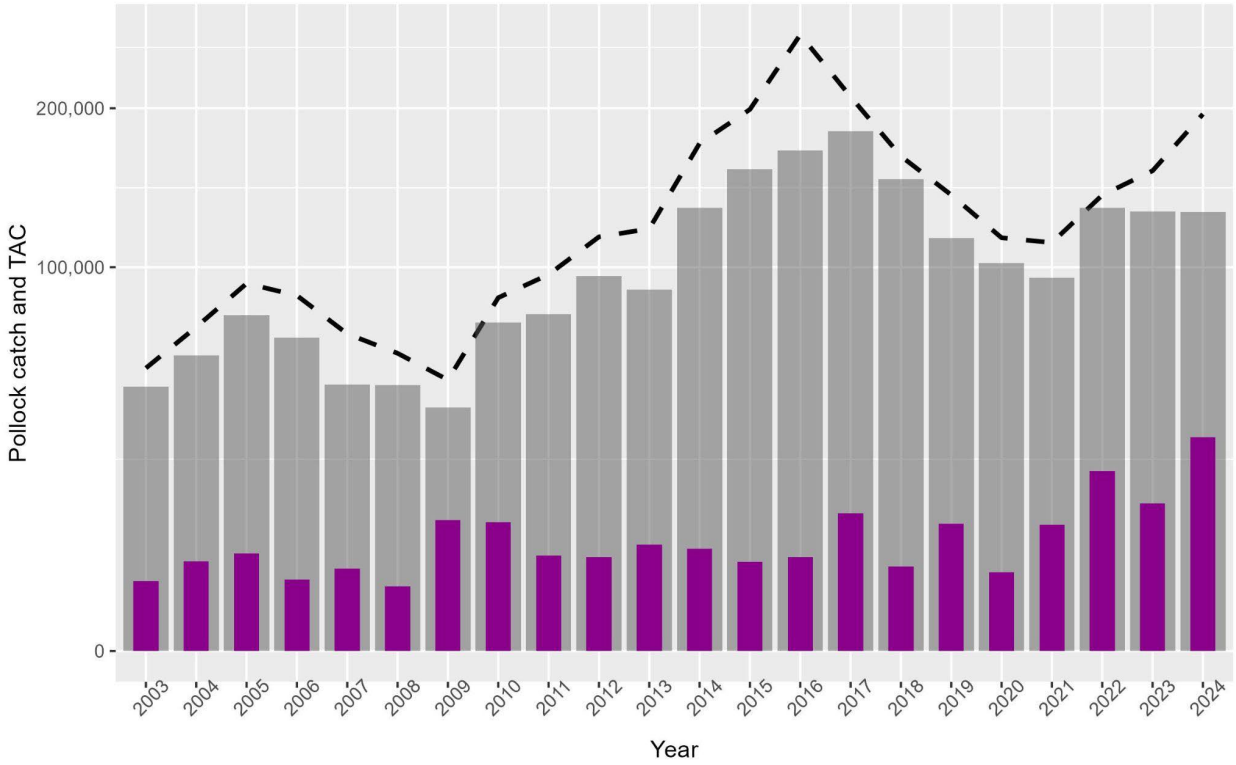


Table 5-17 Gulf of Alaska pollock TAC for all gear types (dashed black line), total catch (mt) for all vessels using trawl gear (grey bars), and catch (mt) inside SSL protection areas (purple bars), 2003-2024. Starting in 2021, vessels participating in the trawl EM category were required to retain all catch due to agency data needs. As a result, discard rates and data collected under EM are more precise due to the reduction in catch estimation.

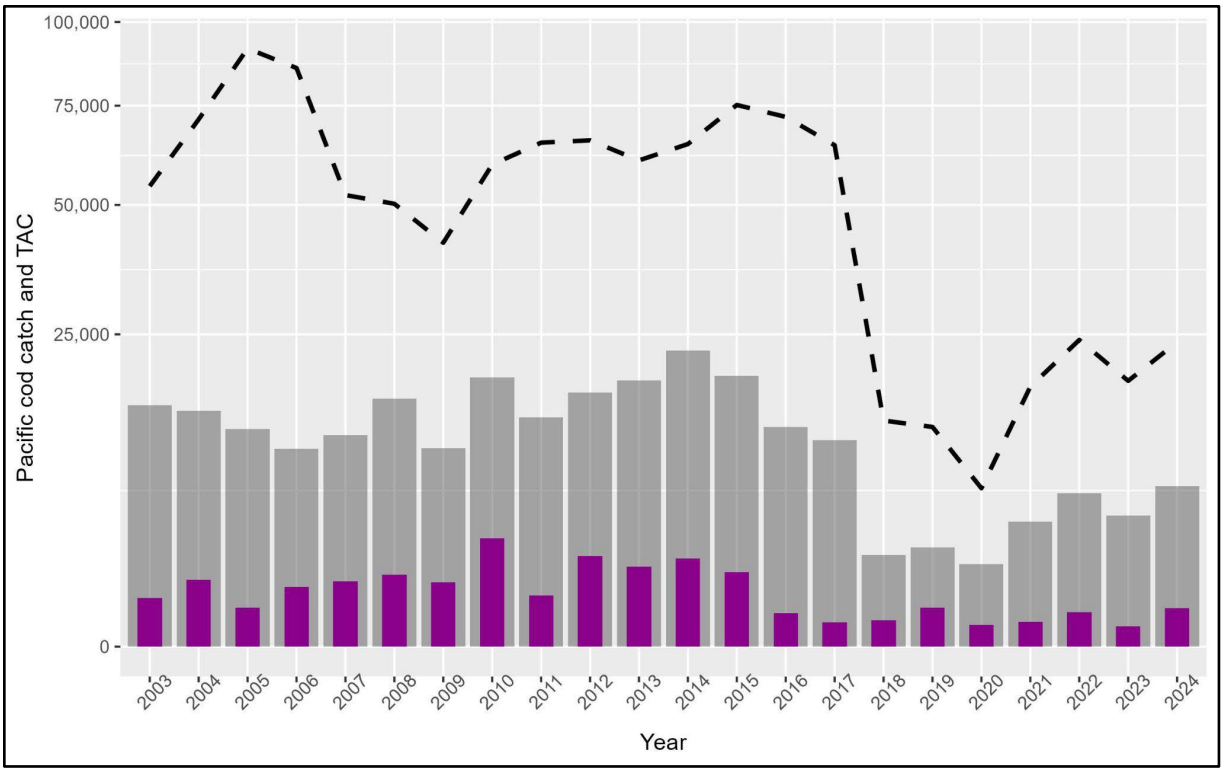


Table 5-18 Gulf of Alaska Pacific cod TAC for all gear types (dashed black line), total catch for all vessels using trawl gear (grey bars), and catch inside SSL protection areas (purple bars), 2003-2024.

Table 5-2 Summarizes data presented in Figure 5-6 to Figure 5-8. Figure 5-6 to Figure 5-8 summarize all non-pelagic and pelagic trawl catch from 2003 to 2024 within, outside, and intersecting the SSL protection areas specific to each prey species (PLCK = Pollock, PCOD = Pacific cod, AMCK = Atka mackerel) by management area (Aleutian Islands, Bering Sea, Gulf of Alaska). All catch is reported in metric tons.

Table 5-19 Summary of non-pelagic and pelagic catch, within, outside, and intersecting SSL protection areas, by prey species, by management area, 2003-2024

Management Area	Location and Species	Location Proportion	Mean Catch Total	Minimum Catch Total	Max Catch Total
AI	Inside AMCK	0.09	4,874.44	23.76	17,792.96
AI	Intersect AMCK	0.11	6,384.87	38.90	13,365.88
AI	Outside AMCK	0.80	42,423.72	21,665.12	58,710.16
AI	Inside PCOD	0.03	153.97	1.01	541.67
AI	Intersect PCOD	0.12	1,490.19	40.27	4,512.31
AI	Outside PCOD	0.85	8,884.04	799.67	26,046.20
AI	Inside PLCK	0.34	419.32	47.63	742.90
AI	Intersect PLCK	0.17	236.73	30.85	767.97
AI	Outside PLCK	0.49	624.94	158.79	1,562.89
BS	Inside AMCK	1.00	1,213.66	41.86	5,288.36
BS	Inside PCOD	0.05	1,747.41	325.54	4,838.78
BS	Intersect PCOD	0.03	905.26	246.67	1,776.82
BS	Outside PCOD	0.92	32,741.40	15,853.87	55,176.77
BS	Inside PLCK	0.09	108,253.61	29,538.01	200,965.86
BS	Intersect PLCK	0.07	80,493.58	35,480.88	168,298.96
BS	Outside PLCK	0.85	1,034,929.70	601,640.50	1,318,349.10
GOA	Inside AMCK	1.00	284.70	21.43	736.78
GOA	Inside PCOD	0.04	422.84	52.29	1,435.13
GOA	Intersect PCOD	0.14	1,548.60	326.68	4,015.31
GOA	Outside PCOD	0.82	9,278.46	1,277.48	17,538.21
GOA	Inside PLCK	0.07	6,819.78	1,656.94	23,485.29
GOA	Intersect PLCK	0.18	18,961.20	7,225.16	44,101.20
GOA	Outside PLCK	0.75	75,347.16	26,953.58	135,433.36

Overall SSL Prey Catch Trends

Atka Mackerel

Catch of Atka Mackerel by trawl gear in the AI has generally remained consistent over time with an average of 53,683 mt and very closely follows the TAC (Figure 5-9). A notable drop in both TAC (associated, in part, with a lower biomass estimate[20]) and catch occurred in 2013 and 2014 (Figure 5-6). AI A80/CDQ catch inside SSL protection areas historically made up a larger percentage of AI Atka mackerel trawl catch until 2011. Beginning in 2011, which coincided with the 2011 SSL interim protection measures, Atka mackerel A80/CDQ catch within SSL protection areas decreased and remains well below catch prior to 2011 (Figure 5-9). Catch in the BS has declined over time, with the onset of the decline beginning in 2008 and co-occurring with the implementation of A80. With implementation of A80, participating vessels fished under a cooperative quota where they preferred to target Atka mackerel in area 541 and directed fishing for Atka mackerel in the BS was prohibited. All catch in the BS for Atka mackerel is incidental catch (Figure 5-7 and Figure 5-12). Directed fishing for Atka mackerel is prohibited in the GOA and incidental catch has varied across time. Of note, there was a dip in incidental catch concurrent with the marine heatwave years (i.e., 2014-2016) (Figure 5-8and Figure 5-15).

For Atka mackerel, there are no clear trends in the BS and GOA management areas as a result of the 2014 SSL protection measures or the 2004 or 2014 MRA adjustments. In the AI, it appears there was a momentary decrease in total catch of Atka mackerel in 2013 and 2014 during the implementation of the SSL protecting measures, but then catch resumed to historic levels. **What is notable is that it appears that while total levels of catch in the AI resumed to historic levels, the proportion of catch occurring inside SSL protection areas decreased on average after 2011 and 2014 SSL protection measures. This trend persists with a slight increase in the proportion of catch occurring inside SSL protections areas in the last three years (2022-2024) and follows increasing TAC trends**.

Pacific Cod

Catch of Pacific cod in the AI has decreased over time, with a notable drop in trawl specific catch in 2011 and 2020 (Figure 5-6 and Figure 5-10). The decline in catch in 2011 may have been related to the 2011 interim SSL protection measures and the drop in 2020 was likely related to market instability due the Covid-19 pandemic. Most notable a low TAC for Pacific cod in the AI as a result of a change in harvest specifications where Pacific cod was specified separately in the BS and AI beginning in 2014. This lower TAC had more impact on the hook-and-line and pot sectors than for trawl sectors because the trawl sector would fish the entire AI TAC early in the year when Pacific cod was aggregated whereas hook-and-line and pot sectors historically fished in the summer months when the weather was better. Catch in the BS has varied over time, with peak catch occurring from 2012 to 2017, which very nearly follows the TAC trend from year to year (Figure 5-13). Catch of Pacific cod in the GOA was relatively consistent from 2003 to 2017, before declining in 2018. catch has remained low since 2018 and follows the TAC trend from year to year (Figure 5-16). There are no discernible trends in catch of Pacific cod in the AI, BS or GOA management areas specific to the protection areas created in 2014 for trawl gear. **Catch of Pacific cod inside SSL protections areas by trawl gear has remained low across time and management areas.** However, related to SSL protection measures in general, as the projected spawning biomass for Pacific cod was estimated to be below 20% of the projected unfinished spawning biomass for 2020, directed fishing for Pacific cod was prohibited in 2020 in the GOA.

Pollock

Trawl catch of pollock in the AI has varied over time, and has consistently been a small fraction of the total AI pollock TAC. Catch trends inside and outside of SSL protection areas have also varied (Figure 5-11). The mean proportion and catch of pollock caught inside SSL protection areas relative to the total

20 https://www.npfmc.org/wp-content/PDFdocuments/SAFE/2024/BSAIatka.pdf

trawl pollock catch in the AI are 34.3% and 419 mt, respectively (Figure 5-6). Mean catch for A80/CDQ inside SSL protection areas is 271 mt and while this comprises the majority (65%) of all pollock trawl catch that occurs in the AI, it is a fraction of the total AI pollock TAC (19,000 mt) and biomass (258,150 mt in 2024; SAFE 2024) (Figure 5-11).

Nearly all of BS pollock is caught by trawl gear and the TAC is almost always fully prosecuted (Figure 5-14). The mean proportion and catch of pollock caught inside SSL protection areas relative to the total trawl pollock catch in the BS are 8.7% and 108,254 mt, respectively (Figure 5-7). A80/CDQ catch inside SSL protection areas is an insignificant proportion with a mean catch of 1,576 mt (Figure 5-14).

Trawl catch of pollock in the GOA has increased since 2003 with the highest years between 2015 to 2018. Trawl catch has remained relatively stable in recent years and very nearly follows the TAC trend with the exception of 2023 and 2024 (Figure 5-17). The mean proportion and catch of pollock caught inside SSL protection areas relative to the total trawl pollock catch in the GOA are 6.9% and 6,820, respectively (Figure 5-8). The GOA figures do not have A80/CDQ vessel data as a separate analysis category. The inside calculations are inclusive of all trawl vessels for inside, intersect, and outside (Figure 5-8 and Figure 5-17).

Summary of Catch

Large changes in catch from year to year are almost always driven by the overarching TAC and no discernible trends in the AI, BS, or GOA management areas specific to the 2004 or 2014 MRA adjustment measures are readily apparent (Figure 5-9 to Figure 5-17). Understanding the impact of SSL protection measures is harder to depict from the data at hand, as there were many measures implemented over time, rather than at a discrete point in time. It is likely that cumulatively these measures have resulted in altered catch trends, but no single measure resulted in a substantial change. The exception to this, as shown in Figure 5-9, is the proportion of Atka mackerel catch caught inside vs outside SSL protection areas, with the proportion of catch occurring inside SSL protection areas decreasing on average after the 2011 and 2014 SSL protection measures.

5.3.5 Effects of the Alternatives on Steller Sea Lions

SSL 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 GOA may be a major contributor. This warming could have impacted pup production, juvenile and adult survival, and/or movement of SSLs (Suryan et al. 2021, Hastings et al. 2023). 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 increasing ocean temperatures 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 future.

Alternatives 1, 2, and 6 will have no meaningful effect on SSLs as they contemplate administrative changes that do not impact timing, location or magnitude of groundfish harvest.

Alternatives 3, 4, and 5 could affect the localized availability of prey in SSL protection areas through the ability to increase topping off behavior inside these areas. For the first time since the early 2000's the wDPS SSL nonpup population is no longer increasing and pup numbers are barely increasing (Sweeney et al.2025 *in review*). Any additional localized prey depletion of SSL preferred prey (Atka mackerel, pollock, and Pacific cod) could have negative impacts to the population. However, the degree of this effect depends on which suite of sub-options and methods are chosen, how the fleet chooses to respond, and how these responses operate within the overall context that this action is expected to maintain overall current catch levels, or potentially in some cases decrease overall catch. A decrease in catch (retained plus discarded) may occur when a vessel must discard a species early in the trip due to not having enough basis species onboard under status quo, but then tops off on that species at the end of the trip to achieve

the MRA. If the vessel had been able to keep the species throughout the trip (Alternative 4) then topping off at the end of the trip may be unnecessary because the MRA was already achieved and would result in the same amount of retention but less discarding of that species, resulting in an overall decrease in catch. What is important in the context of SSLs are any changes that could result in **localized depletion** of preferred prey items or a significant increase in topping off behavior inside SSL protection areas, even if the overall action maintains or decreases catch levels due to increased retention.

As contemplated under Alternative 4 for other sectors, BSAI pollock and BS Atka mackerel, MRAs are already calculated at the time of offload for non-AFA vessels. MRAs for C/Ps fishing under a rockfish CQ permit in the GOA are calculated at the end of each weekly reporting period for all species. Under the current offload and weekly calculation method, targeted harvest of species closed to directed fishing in an SSL protection area would be measured against the total basis species harvested between offloads or within a weekly reporting period instead of within an area closed to directed fishing. As a result, it is permissible for a non-AFA vessel to target BSAI pollock and BS Atka mackerel inside an SSL protection area as long as there is enough basis species onboard the vessel to not exceed the MRA at the time of offload. **The basis species used to calculate the MRA of BSAI pollock and BS Atka mackerel can come from any area within that management area. The same is true in the GOA for C/Ps fishing under a rockfish CQ permit except the MRA is calculated on a weekly basis.** Although these areas are closed to directed fishing, directed fishing is based on being over the MRA. If the MRA is not exceeded at the time of offload or at the end of the weekly reporting period, then directed fishing has not technically occurred in the SSL protection area and there is no enforcement violation. **MRAs do not prevent vessels from catching SSL prey species inside protection areas, they only limit the amount they can retain.**

Currently for all other species and areas, 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 SSL protection areas. If MRAs for GOA pollock, BSAI and GOA Pacific cod and AI Atka mackerel, the other SSL prey species, in additional areas were also calculated offload-to-offload, or trip triggers surrounding protection areas were eliminated, it could increase the ability to top off on those SSL prey species inside protection areas as well.

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. **However, 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, catch that species, and still be under the MRA for that species at the time of the offload.**

However, factors other than MRAs may limit the expansion of entering an SSL protection area and topping off on SSL prey species. As heard during public testimony during initial review, a common species for topping off is Pacific cod. For the A80 fleet, Pacific cod is a species commonly harvested in other mixed flatfish species. However, A80 has a Pacific cod allocation and is not allowed to exceed that allocation, which includes discarded Pacific cod. As a result, an A80 vessel must stop all fishing activities once its Pacific cod allocation has been reached because there is a high risk it will catch some Pacific cod in the pursuit of other species. **Due to these constraints within the sector's allocation, A80 vessels must carefully weigh any decisions to top off on Pacific cod in any area in order to ensure they have Pacific cod to support fishing for other important target species**.

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 POP 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 SSL closure areas. The Council recommended that the trip trigger be offload-to-offload and not instantaneous when a vessel was not in an SSL closure area. However, if a vessel was within an SSL 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 SSL closure area would be unlikely to reduce discards and would be costly to participants.

Although it is true that under an offload-to-offload or weekly reporting calculation a vessel could retain more SSL prey species inside SSL protection areas through topping off behavior, status quo instantaneous MRA calculations do not completely prevent topping off behavior. If the Council's purpose and intent of prohibiting directed fishing of SSL prey species inside those areas is to control the total amount of retained catch in those areas for SSL concerns and spread that catch out over time, then the current tools of directed fishing prohibition and use of MRAs are inadequate. These tools are ineffective in preventing topping off behavior (and therefore targeting) of SSL prey species inside the protection areas, even with instantaneous MRAs. Instantaneous MRAs 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 a 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.**

Table 5-3 shows the possible tradeoffs between discards versus retaining SSL prey species inside SSL protection areas for Alternatives 3 and 4 and Methods 1 and 2. Under Alternative 3, Method 2 a vessel would be subject to an instantaneous MRA and could only use basis species accumulated inside the SSL area. This combination would likely result in the highest amount of discarding because a vessel would not be able to retain the SSL prey species until enough basis species were accumulated from inside the SSL area. However, there would also be very little opportunity to intentionally top off on the SSL prey species inside the SSL area. Under Alternative 4, Method 1 a vessel would not be subject to the instantaneous MRA and could use all basis species from both outside and inside the SSL area to retain SSL prey species in the SSL protection area. This combination would likely result in the least amount of discarding because the vessel would not only continue to keep up to the MRA for all basis species onboard, but could also keep additional prey species if the vessel projects they will have enough basis species onboard by the time of the offload. However, this also creates the largest opportunity to top off on SSL prey species inside SSL protection areas. It is difficult to tell what the differences in discarding and topping off opportunities may be under Alternative 3, Method 1 and Alternative 4, Method 2, but they are both likely to be somewhere in between the highest and lowest amount. Ultimately it depends on prevailing fishing conditions and vessel behavior. Under Alternative 3, Method 1 a vessel would be subject to an instantaneous MRA, but could use outside species currently onboard while inside an SSL area. Because the vessel is subject to an instantaneous MRA, discarding will be required unless there is enough basis species onboard and intentionally topping off may be possible but difficult. Under Alternative 4, Method 2 the vessel is not subject to an instantaneous MRA but can only use basis species from inside the SSL protection area. This could result in discarding if the vessel is unable to obtain enough basis species from inside the SSL area. Topping off opportunities will also hinge on how many basis species are accumulated in the SSL protection area for the trip and how much of the MRA species they are encountering naturally. The Council could weigh these tradeoffs when taking final action. **One option for Method 2 is to limit the species that is closed to directed fishing inside the SSL protection area to an MRA calculation that only uses newly accumulated basis species, while continuing to let all other MRA species accrue against all basis species onboard from both before and after the vessel entered the area.**

Topping off behavior depends on whether or not a vessel has enough basis species and, if there is enough basis species, the vessel has to want to top off inside the SSL protection area specifically. If a vessel is already encountering a high rate of the SSL prey species while fishing under Alternative 4, Method 1, then the vessel may not have any additional topping off availability and might have to discard just to remain under the offload MRA. Topping off opportunity and regulatory discards are specific to each individual fishing trip and dependent on the amount of basis species onboard, whether there is an instantaneous MRA in place, how much of the MRA species they are encountering naturally, and if there is a desire to top off. Table 5-3 is meant to show possible topping off opportunities in SSL protection areas, but this does not necessarily mean that more topping off will occur inside SSL protection areas than the status quo. As shown in Table 5-3, selection of Method 1 under Alternative 3 or 4 results in increased risk of topping off, as compared to selection of Method 2. **Overall, Alternative 4 would likely provide more opportunity for topping off than would be provided under Alternative 3.**

Table 5-20 Possible effects on regulatory discards and topping off opportunity of SSL prey species inside SSL protection areas based on Alternatives 3 and 4 and Methods 1 and 2.

Alternatives and Methods	Overall Regulatory Discards	Risk of Topping Off Inside SSL Protection Areas
Alternative 3, Method 1	Medium	Medium
Alternative 3, Method 2	Highest	Lowest
Alternative 4, Method 1	Lowest	Highest
Alternative 4, Method 2	Medium	Medium

Note: This table represents a range and does not indicate overall risk. For example, the risk is highest under Alt 4 method 1 however the overall risk of change in behavior is still considered low.

Under Alternative 5, while an annual accounting period is mostly advantageous due to reduced discards, an annual accounting system for BS pollock also introduces a risk to the allocation structure of the BS pollock fishery. The core issue is that the flexibility of an annual MRA may incentivize the A80 fleet to increase its overall harvest of pollock. A80 cannot avoid all pollock, however as shown in the BSAI A80 Program Review[21], the amount they harvest is consistent over the past 10 years. By providing an annual accounting period, the regulation may incentivize more pollock catch. If that occurs, this would lead to an increase in the sector's total retained harvest of pollock compared to the current method, where trip-by-trip avoidance behavior may have kept the total annual bycatch below the theoretical maximum. This may also provide an avenue for increased catch within SSL protections areas or topping off behavior that may otherwise have been tempered by trip-by-trip accounting. However, A80/CDQ catch within BS SSL protection areas averages around 1,576 mt per year (Figure 5-14) and with an overall BS TAC of 800,000 to 1,500,000 mt, 1,576 mt is insignificant. Should this scenario occur, it would be tracked and documented by NMFS inseason management and, if wished, could be reported on during the NMFS inseason management report to the Council. Furthermore, this scenario is likely constrained by statements made during public testimony (see Section 2.5), which include A80 vessel processing capabilities and ICA Agreements.

Section 5.3.4 illustrates catch over time by trawl gear broadly and specific to A80 and CDQ vessels. While clear, broad signals indicating the effectiveness of SSL protection measures or changes in behavior as a result of MRA adjustments are difficult to tease out; what is most clear is that for fisheries that prosecute a majority of their TAC, fishing trends very closely follow the year to year variation in TAC

[21] https://www.npfmc.org/wp-content/PDFdocuments/catch_shares/AM80/AM80ProgramReview_0425.pdf

(ex. Figure 5-13, Figure 5-14, Figure 5-15). In some cases, we can see changes in fishing as a result of SSL protections, specifically the lower AI Pacific cod TAC set in 2014 (Figure 5-10) and the reduction in catch of Atka mackerel inside SSL protection areas in the AI from 2011 on (i.e. 2011 interim SSL protection measures and 2014 measures; Figure 5-6). If MRA adjustments were to have an effect on fleet behavior, we would expect to see a change as a result of implementation of these measures. In 2004, the 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. Figure 5-11 and Figure 5-14 show AI and BS pollock catch by A80 and CDQ vessels not targeting pollock inside SSL areas. No discernible or lasting difference in catch that occurs within SSL protection areas is seen as a result of the 2004 MRA adjustments. Likewise, in 2014 the 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. Figure 5-12 shows the BS Atka mackerel catch by A80 and CDQ vessels inside SSL areas. No discernable or lasting difference in catch that occurs within SSL protection areas is seen as a result of the 2014 MRA adjustments.

Understanding whether vessel behavior changed as a result of the 2014 SSL protection measures is complicated. In data presented in this analysis, the starkest changes are where large changes to the overarching TAC were made (i.e., BS and AI split, reduction in AI TAC). Other than a response to large changes in TAC, as the SSL protection measures were implemented in various stages (i.e., from 1991-2014, see Section 5.3.2), it is hard to discern a clear response in vessel behavior. However, we do see one clear difference before and after the 2014 SSL protection measures and that is in the reduction of the proportion of catch that occurs inside SSL protection areas for AI Atka mackerel (Figure 5-6).

In summary, for the proposed action to have negative potential effects on SSL prey levels, a series of events would need to occur. First, the Council would need to choose either Alternative 3, Method 1 or Alternative 4, Method 1; or Alternative 5. Second, the affected sectors would need to choose to alter their behaviors from the status quo to increased topping off in SSL protection areas. Third, topping off would need to occur at a level that negatively impacts SSL localized prey. It is not clear that affected sectors would change behavior, or that if that occurred, that the additional topping off would be at levels significant to SSLs. However, if prey was depleted so as to detrimentally affect SSLs, this could require Council action in the future to respond and could lead to reevaluation of coverage under the ESA. Alternative 3, Method 1, Alternative 4, Method 1, and Alternative 5 provide for increased opportunity to increase catch within SSL protection areas through topping off behavior, as compared to selection of Alternative 3, Method 2, Alternative 4, Method 2 or no selection of Alternative 3, 4 and 5. However, while the opportunity for increased catch within SSL protections may be provided through selection of specific Alternatives, there are current barriers or deterrents that will likely prevent a drastic increase in topping off behavior, specifically in the BSAI. These barriers and deterrents are easiest described by prey species and include:

- BS Annual Pollock Considerations
    - Per industry communication A80 vessels not configured to process pollock (i.e., set up to process flatfish)
    - If there is any change in ICA harvest, NMFS will report that information to the Council during the inseason management report in December
    - If NMFS increased ICA due to annual pollock harvest increase, Council could revisit annual A80/CDQ MRA accounting (i.e., Alternative 5)
- BSAI Pacific Cod
    - Most Pacific cod is caught in BS
    - Pacific cod is a limiting species for A80 (i.e., A80 prohibited from exceeding Pacific cod allocation)
    - Limited shoreside processing facilities in AI, resulting in less Pacific cod catch from the AI

- AI Atka Mackerel
    - AI trawl sector hard cap of Atka Mackerel in SSL critical habitat.[22]

There is also the potential for topping off behavior to *decrease* under Alternatives 3, 4 and 5 should vessels encounter MRA species in sufficient amounts earlier in a trip during the course of normal fishing operations, where under status quo they would have had to discard those MRA species. Ultimately, how the proposed action affects SSL and prey within SSL protection areas comes down to how vessels choose to change behavior in response to the suite of Alternatives selected. Changes in vessel behavior is not easily predicted, but interpretation of the data at hand suggests that Alternatives 3, 4 and 5 provide increased the opportunity for topping off, but that in practice the risk of increase is low.

Extensive regulations have been implemented over the years to prevent localized depletion of SSL prey and current management practices and harvest levels appear to have coincided with a ~20-year period of recovery for wDPS SSLs. However, recent population trends indicate that the wDPS of SSL nonpups is no longer increasing (Sweeney et al. 2025 in review) and the population is still well below historic population levels (see Figure 5-4). Any action that increases the catch of preferred prey species inside SSL protection areas could negatively impact further recovery or stability of the wDPS of SSLs. If the Council wishes to proceed with either Alternative 3, 4 or 5, it may wish to consider mechanisms that would de-incentivize "topping off" in protected areas, or consider amongst the scenarios provided in Table 5-3, the suite of options that have the least risk of increasing topping off behavior for Alternatives 3 and 4 (i.e., Method 2). Regardless of the suite of options chosen, NMFS will continue to monitor catch and trends, and should any meaningful change in catch within SSL protection areas occur, this change will be documented and reported to the Council.

[22] SSL critical habitat encompasses more area than SSL protection areas. The trawl sector cap for Atka mackerel was implemented as a result of the NMFS 2014 biological opinion.

6 Regulatory Impact Review

The requirements for all regulatory actions specified in E.O. 12866 are summarized in the following Statement from the E.O.:

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

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

- Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, 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 E.O.

6.1 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 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.

6.2 Markets and Target Products

6.2.1 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 SAFE Report for the Groundfish Fisheries of the GOA and BSAI 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% 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 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% 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% 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.

6.2.2 Target Products

The following section utilizes parts of the SAFE 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% from 2022. Groundfish accounted for 83% 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 ex-vessel value of the FMP groundfish fisheries off Alaska was $858.65 million, which was 55% of the ex-vessel value of all commercial fisheries off Alaska in 2023. After adjustment for inflation, the real ex-vessel value of FMP groundfish decreased $136.73 million in 2023 and the aggregate real ex-vessel prices decreased 21% to $0.20 per pound. Nominal pollock ex-vessel prices decreased 16% to $0.15 per pound in the BSAI and 25% to $0.13 per pound in the GOA. Pacific cod

nominal ex-vessel prices decreased 4% to $0.44 per pound in the BSAI, and 10% to $0.42 per pound in the GOA. Among the other species that are the focus of the shoreside ex-vessel fisheries: GOA flatfish ex-vessel prices decreased 19%, GOA rockfish prices decreased 3%, and GOA sablefish prices decreased 29% (in nominal terms).

The gross value of the 2023 groundfish catch after primary processing (first wholesale) was $2.56 billion, a decrease of 5% in real terms from 2022. This change was the combined effect of a 13% decrease in the real aggregate 2023 first wholesale price to $1.42 per pound which was offset by aggregate production volumes increasing 8% to 820.1 thousand mt. In the BSAI, aggregate first wholesale value increased 6% 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%) 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.

6.3 Impacted Entities

This section describes the expected impacts of the proposed alternatives on the various sectors that participate in the BSAI and GOA groundfish fisheries. The degree and nature of impacts vary by sector and are dependent on the characteristics of each alternative.

All fishing sectors could be impacted by the proposed MRA revisions, depending on the alternatives selected. These sectors include the A80 C/P, AFA C/P, AFA Motherships, trawl CV (AFA CV and non-AFA trawl CV), HAL C/P, HAL CV, and Pot C/P / CV. Alternatives 2, 4, and 6 would impact all BSAI and GOA groundfish fishing sectors in the following ways:

- **Alternative 2** would improve the clarity of MRA operation. This alternative would reduce confusion and improve compliance across the fleet by adding specificity on how MRAs interact with IR/IU rules, fishery management programs, and delivery scenarios. This clarity is especially important for vessels operating in areas with overlapping closures or differing fishing prohibitions.
- **Alternative 4** would allow MRA calculations for additional species to be calculated based on catch from the time the harvesting, receiving, or processing of groundfish is begun or resumed in an area to the offload or transfer of all fish or fish product from that vessel (*e.g.,* offload-to-offload) This Alternative could reduce discards and improve retention of valuable incidental catch across all BSAI and GOA groundfish vessel sectors. This alternative allows vessels to better align their harvest with the most economically valuable species encountered during a trip. Total retained volumes are not expected to increase, as vessel hold capacity remains fixed and catch is subject to other regulatory limitations. Instead, lower-value catch may be displaced by higher-value retained incidental species, which could lead to positive economic benefits.
- **Alternative 6** would, in the case of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip, provide an exemption from MRA requirements applicable to all vessel sectors.

In addition to the impacts applicable to all BSAI and GOA groundfish fishing sectors listed above, additional impacts are expected to arise from one or more of the action alternatives and options that are unique to specific sectors, vessel types, or gear types. The impacts unique to these entities are detailed in the following subsections.

6.3.1 Amendment 80 Sector

The A80 sector, composed of non-AFA trawl C/Ps, would be impacted by Alternatives 2, 3, 4, 5, and 6. This sector's activity is described further in Section 3.1. The impacts that Alternatives 2, 4, and 6 would have on this sector are detailed in the parent section, Section 6.3.

Amongst the A80 allocated 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 (Table 3-1). Rock sole and flathead sole, although contributing less to total revenue for the sector, are also important species for some A80 companies. In addition to the species allocated to the A80 sector, A80 vessels also catch and process many other BSAI groundfish species including arrowtooth flounder, Alaska plaice, sablefish, and pollock. During the 2020 through 2023 period, arrowtooth flounder, Alaska plaice, Kamchatka flounder, Greenland turbot, and Northern rockfish had retention rates routinely above 90% (Table 3-1).

Alternative 3 changes the definition of a fishing trip for C/Ps and motherships, which includes vessels in the A80 sector. This would increase operational flexibility and allow for longer trips, which could reduce regulatory discards by allowing incidental species caught early in a trip to be retained. Total retained volumes are not expected to increase, as vessel hold capacity remains fixed and catch is subject to existing TACs and other regulatory constraints. Instead, lower-value catch may be displaced by higher-value retained incidental species, which could improve processor product yield and margins without increasing throughput.

A80 vessels are uniquely affected by Alternative 5, which applies specifically to this sector. This alternative allows for annual MRA calculations for BS pollock, conditional on incentive plans or controls that prevent increased average catch. The intent is to enhance operational flexibility and reduce enforcement complexity, which could allow A80 vessels to better manage pollock retention while remaining within TAC limits, particularly during multi-species fishing operations.

6.3.2 AFA Vessels

The AFA sector would be impacted by Alternatives 2, 3, 4, and 6. The impacts of Alternative 6 on this sector are detailed under the parent section, Section 6.3. This sector's activity is described in Section 3.1.

Pollock is the primary species harvested by this sector, but two or three vessels have targeted Pacific cod, while several vessels target yellowfin sole. The average first wholesale gross value of BS pollock from 2020 through 2023 was $680.91 million which is 96% of the total first wholesale gross value (Table 3-2). The sector routinely has high retention rates for other, non-target species. 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 3-2).

Within the options under Alternative 2, AFA vessels, including both C/Ps and CVs, are uniquely impacted by Options 3 (correction of regulation citations) and Option 4 (CDQ and AFA vessel interactions). Option 4 clarifies how MRAs are calculated for AFA vessels, particularly in mixed-program operations. While both options are administrative in nature, they are expected to reduce compliance complexity for the sector.

Alternative 3 directly changes the definition of a fishing trip for C/Ps and motherships, which includes vessels in the AFA sector. This alternative would increase operational flexibility and allow for longer trips, which could reduce regulatory discards. Total retained volumes are not expected to increase, as vessel hold capacity remains fixed and catch is subject to existing TACs and other regulatory constraints. Instead, lower-value catch may be displaced by higher-value retained incidental species, which could improve processor product yield and margins without increasing throughput.

Alternative 4 extends offload-to-offload MRA accounting to additional species, potentially increasing retention of valuable incidental catch and reducing waste. Both Option 1 (limited species) and Option 2 (all groundfish) would make MRA compliance more predictable and likely improve economic outcomes in certain cases. Pertaining specifically to the AFA sector, Alternative 4 would remove the exclusion of AFA vessels for BSAI pollock and BS Atka mackerel from the offload calculation.

For the AFA sector, the impacts of Alternatives 3 and 4 would be minimal but positive in nature. The sector has high retention rates across incidental species, such as 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% at some point during the 2020 through 2023 period. Therefore, any reduction in regulatory discards resulting from a change in the MRA accounting period for additional species, or a reduction in trip triggers, would likely result in minimal positive economic impacts for this sector.

6.3.3 HAL and Pot C/Ps

The HAL C/P sector includes vessels that 1) are part of the Freezer Longline Coalition (FLC) and 2) are not part of the FLC. The average first wholesale gross value of Pacific cod in the BSAI from 2020 through 2023 was $134.84 million which was 93% of the total first wholesale gross value for the sector in the BSAI (Table 3-4). The sector also received greater than 3% of their total average first wholesale gross value from pollock ($4.97 million) and 3% from BSAI skates ($4.93 million). Both pollock and skates are incidental species for these vessels. Pacific cod, pollock, and skates made up nearly 100% 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% and 26% of the average total first wholesale gross value for the sector in the GOA (Table 3-4). These two fisheries represent nearly 100% of the average total first wholesale gross value for the sector during the 2020 through 2023 period.

Pot C/Ps use pot gear to target primarily Pacific cod and sablefish. Pacific cod in the BSAI had a combined average ex-vessel value of $17 million during the 2020 through 2023 period, while the sablefish fishery had an average ex-vessel value of $11 million (Table 3-6). In the GOA, the average ex-vessel value of sablefish during the 2020 through 2023 period was $53 million which represented 95% of the average total ex-vessel revenue, while the ex-vessel value of the GOA Pacific cod fishery was $3 million.

HAL and pot C/Ps are minimally impacted by the proposed alternatives, but still experience potential benefits. HAL and pot C/P vessels are impacted by Alternatives 2, 3, 4, and 6. The impacts of Alternatives 4 and 6 on this sector are detailed under the parent section, Section 6.3.

Alternative 2 clarifies that MRA rules take precedence over IR/IU rules for CVs delivering to processors, which could reduce confusion in mixed-area fishing operations. This clarification is particularly helpful for HAL CVs targeting Pacific cod and sablefish, especially when operating near regulatory boundaries. For example, a HAL CV fishing for Pacific cod in an area closed to retention of an IR/IU species may benefit from clarified regulatory guidance.

Alternative 3 directly changes the definition of a fishing trip for C/Ps and motherships, reducing the number of triggers that end a trip from five to two. This would increase operational flexibility and allow for longer trips, which could reduce regulatory discards by allowing incidental species caught early in a trip to be retained. The change may also allow vessels more opportunity to "top off" with valuable incidental species at the end of a trip, potentially increasing revenue.

Alternative 4 could modestly increase the retention of valuable incidental species like skates or rockfish, although the effect is less pronounced due to existing high retention rates, as described in Section 3.1.

6.3.4 Non-AFA Trawl CVs

Non-AFA trawl CVs would be directly impacted by Alternatives 2, 4, and 6. The impacts of Alternatives 4 and 6 on this sector are detailed under the parent section, Section 6.3.

The primary target for trawl CVs in the BSAI is pollock followed by Pacific cod, yellowfin sole, Atka mackerel, POP, and Alaska plaice (Table 3-3). The average total gross ex-vessel value during 2020 through 2023 for the BSAI was $265.7 million with pollock contributing 89% of the total at $237.6 million (Table 3-3). In the GOA, the average total gross ex-vessel value during 2020 through 2023 was $46.2 million of which pollock contributed 77% of the total at $34.7 million (Table 3-3). Retention rates for primary BSAI and GOA groundfish species routinely exceeded 90%. Of the BSAI groundfish species, sablefish, Greenland turbot, and Pacific cod had the highest average ex-vessel value per mt during the 2020 through 2023 period. Of the GOA groundfish species, sablefish, Pacific cod, big skates, and longnose skates had the highest average ex-vessel value per mt during 2020 through 2023 (Table 3-3).

Within the options under Alternative 2, this sector would be primarily impacted by Options 1 and 5. Option 1 clarifies that motherships are responsible for the overall MRA of any CV delivering unsorted codends. This option is beneficial for trawl CVs, which are not able to determine whether they are under the MRA if they do not sort their codends. In relation to Option 5, non-AFA CVs often deliver to shoreside processors and may operate in areas with differing MRA rules. Clarifying that MRAs take precedence over IR/IU regulations (Option 5) would reduce regulatory confusion and support better compliance, especially when incidental catch of IR/IU species like Pacific cod or pollock occurs in mixed-target trips.

6.3.5 Shoreside Processors and Stationary Floating Processors

Some indirect economic benefits may accrue to shoreside and stationary floating processors that receive landings from affected vessels. These benefits are primarily linked to increased retention of high-value incidental species under Alternatives 3 and 4, particularly through reduced regulatory discards.

Specifically, by allowing more flexible MRA accounting (e.g., offload-to-offload under Alternative 4), vessels may retain incidental catch that would otherwise be discarded early in a trip. This could result in a shift in catch composition toward higher-value species, enhancing the economic value of landings. Total retained volumes are not expected to increase, as vessel hold capacity remains fixed and catch is subject to existing TACs and enforcement. Instead, lower-value catch may be displaced by higher-value retained incidental species, which could improve processor product yield and margins without increasing throughput. Thus, indirect benefits to processors are limited to improved economic efficiency and product value, rather than any increases in processing volume.

6.4 Expected Effects of Alternatives

This section presents a discussion of the economic effects that might be expected to occur as a result of modifying the MRA regulations. 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.

Due to the lack of data indicating the volume of discards that occurred due to MRA regulatory constraints, qualitative analyses are used to describe the ways in which vessel behavior or economic impacts would change under the action alternatives. Though data is insufficient to determine the magnitude of the impact, the overall economic impact of changing the MRA management and/or accounting period for all groundfish species in the BSAI and GOA is expected to be positive under the action alternatives.

The economic impact analysis focuses on Alternatives 1, and Alternatives 3 through 6. Options under Alternative 2, listed below, were found to primarily result in improvement in the clarity of current regulations. Alternative 2 offers clarifications rather than structural changes. The options under Alternative 2 would improve regulatory certainty for C/Ps and motherships, particularly in how MRAs apply when vessels operate across different fishery management programs or deliver unsorted codends. This is expected to reduce compliance burdens without altering fishing behavior, therefore these options have minimal quantifiable economic impacts on the impacted entities. Alternative 2 Option 7 may result in a reduction of discards in limited cases. The potential reduction in regulatory discards that may occur under this Alternative and Option (as described in Section 2.2) is minor in nature, and would not result in any economic gains for vessels facing this regulatory bind under the no action alternative.

6.4.1 Expected Effects of 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 full 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 resulting in vessels that retain all catch as required in the trawl EM program potentially exceeding the MRA of non-pollock species and therefore directed fishing for that species.

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 vessel 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 fish closed to directed fishing. 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 species (see Appendix 2 for full tables). For most BSAI and GOA 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 catch of a species closed to directed fishing over the MRA, including valuable 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 species closed to directed fishing up to the MRA. Once the vessel has sufficient basis species to meet the instantaneous MRA calculation period, then the vessel operator can retain species closed to directed fishing up to the MRA for that species. For valuable 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 these 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.

Under Alternative 1, BSAI pollock MRA provisions on non-AFA vessels would continue to be calculated and accounted on an offload-to-offload basis. The current trip-based system, with its five complex triggers for C/Ps, constrains vessels to manage their pollock bycatch on a short-term, tactical basis. Regulations for the pollock MRA, IR/IU require 100% retention of pollock. For vessels that are not allowed to participate in directed fisheries for pollock, the IR/IU regulation requires that vessels retain all pollock (with minor exceptions for damaged or contaminated fish) up to the 20% MRA. The current offload-to-offload MRA enforcement period for pollock was expanded from instantaneous in June 2004. The primary rationale behind expanding the MRA enforcement period was to give vessels the opportunity to more effectively manage the competing requirements of IR/IU and MRA, while retaining more of their pollock if at any given point during the trip they have more pollock on board than the 20% allowed by the MRA. In other words, this expansion was expected to give vessels the ability to reduce their regulatory discards of pollock. Under current offload-to-offload MRA regulations, discards of pollock still occur, typically during A season where the A80 fleet has a higher pollock encounter rate.

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, even when the calculation period is offload-to-offload.

6.4.2 Expected Effects of Alternative 2

This alternative would revise MRA regulations to clarify (1) the definition of a fishing trip, (2) calculations for MRAs, and (3) applications of MRAs. Operationally, effects under this Alternative are not expected to be different from the status quo. The intent of this Alternative is to clarify existing regulations.

6.4.3 Expected Effects of 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 C/Ps and motherships (not including current offload-to-offload species - BSAI pollock, BS Atka mackerel, and weekly reporting period species in the CGOA Rockfish Program). Two triggers would remain: (1) when all fish or fish product is offloaded and (2) 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. 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.

The Council identified two methods under Alternative 3:

Method 1: Use all basis species accumulated on the vessel when calculating MRAs for each trip regardless of fishery closures and protection areas.

Method 2: Only use basis species accumulated after a change in directed fishing has occurred due to an inseason action or entering a protection area for the species that had a change in status for each trip.

These methods were also listed under Alternative 4. The expected economic effects of each method are described further in Section 6.4.4.

As described in Section 2, 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 constraining 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 t species that are closed to directed fishing. Early in the trip, the MRA for a valuable l 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 a species that is closed to directed fishing and exceeds the MRA for the basis species currently on board, the portion of the species closed to directed fishing exceeding the MRA must be discarded, known as a regulatory discard. Many of these species are valuable, and would not otherwise be discarded if regulation did not mandate the discard. For valuable 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 species closed to directed fishing 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.

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 under Alternative 1. It may also provide increased opportunities to target incidental catch 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 requirements in place

during this time period were at a weekly level, and trip-specific catch reporting periods were not yet in place. Extending MRA accounting beyond this seven-day maximum would increase the maximum accounting interval, which may dilute this traditional constraint to 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 in CAS. However, it is possible to estimate which trips ended due to the week ending criteria by looking at the day of the week harvest occurred. Absent the week ending criteria, it is reasonable to assume that trips would end due to one of the other trip triggers with approximately equal proportions on each day of the week. The week ending criteria triggers 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.

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 fishing trip for the purposes of MRA calculations 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 6-1 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 C/Ps
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.

This alternative provides greater operational flexibility during a fishing trip by reducing the number of trips a vessel triggers between offloads, therefore increasing the length of each 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.

Impact on Regulatory Discards

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 species closed to directed fishing that would have otherwise been discarded under Alternative 1 due to insufficient volumes of basis species.

Alternative 3 is expected to have a positive economic impact on harvesters by reducing regulatory discards that occur at the start of fishing trips triggered under Alternative 1.

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 required 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 following scenario has been highlighted as a simplified example of how Alternative 3 could have a positive economic impact for a vessel by reducing regulatory discards. 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 two species: a basis species, and a species closed to directed fishing 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 1 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 2 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 1. 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, Alternative 3 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 6-2 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 1 (Day 1)	10 mt	3 mt	0 mt	0 mt	0 mt
	Trip 2 (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 1 (Day 1)	10 mt	3 mt	0 mt	0 mt	0 mt
	Trip 1 (Day 2)	10 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**

Impact on Topping Off

Additionally, under certain conditions, Alternative 3 may provide additional opportunities to top off on valuable species closed to directed fishing at the end of the trip. This impact is dependent on an operator's ability to utilize the full MRA for desired incidental species under the current regulatory environment. For many high-value species closed to directed fishing, operators have a strong economic incentive to harvest as close as possible to the MRA in order to maximize the value of each voyage. For incidental species with instantaneous enforcement periods, vessels need to build up a "ballast" of basis species early in the trip before they are able to target valuable incidental species. 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" so that they can harvest as close to the MRA as possible. If harvesters are unable to harvest up to the MRA for valuable incidental species under Alternative 1, the increased operational flexibility under Alternative 3 may help vessels maximize the harvest of these species. 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 also

provide additional time for operators to engage in targeted topping off efforts for high-value incidental catch species.

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. It is reliant on individual vessel behavior, and whether the species has other constraining limits that may disincentivize vessels in a specific sector from harvesting additional volumes. A vessel with the ability to limit incidental catch or the ability to discard low valued fish provides more discretion for "topping off" on species closed to directed fishing. 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. Additionally, "topping off" is not necessary for incidental species with MRAs calculated at offload[23] (BSAI pollock and BS Atka mackerel). For these species, Alternative 3 would have no impact on retention or harvest efforts.

Some of the conditions that may need to be met for additional "topping off" to occur under Alternative 3 include, but are not limited to: 1) the incidental species has a high commercial value compared to other species closed for directed fishing and/or species open for directed fishing, 2) the vessel is not able to harvest up to the MRA for that incidental species on each fishing trip under Alternative 1, 3) the vessel expects to encounter high catch per unit effort (CPUE) for that species under certain conditions, and can modify their fishing practices to do so, 4) the vessel has capacity in their hull for additional catch volumes, and 5) the vessel operator wishes to retain additional volumes of this species.

In certain cases, valuable incidental species have other regulatory constraints that minimize the impacts of Alternative 3. For example, as described in the 2025 A80 Program Review, Pacific cod is an important "choke species" for vessel operators. A80 C/Ps are allocated 13.4% of the Pacific cod ITAC, and according to A80 owners and operators, the "hard" cap under A80, coupled with the size of the allocation, and other rationalization elements of A80, has led to the transition of Pacific cod from a target species to an incidental catch species that sometimes constrains harvest in other target fisheries. In other words, under the hard-cap on Pacific cod, A80 operators must manage their incidental catch of Pacific cod in ways that are similar to ways they manage halibut or crab PSC apportionments. If the allocation is met, the vessel may risk losing the opportunity to keep working later in the year in other profitable targets that have an intrinsic encounter rate. Therefore, A80 operators are unlikely to increase fishing efforts for Pacific cod under Alternative 3, even though the Alternative would give them increased opportunities to do so.

With some exceptions, including the above example, 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, the presence of additional regulatory constraints, 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.

23 Alternative 3 and Alternative 4 interact with each other if chosen for final action. Section 3.7 describes these interactions further.

6.4.4 Expected Effects of Alternative 4

This alternative would add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors. There are two options under consideration:

> **Option 1:** Add BSAI Pacific cod, GOA Pacific cod, GOA pollock, BS skates, CGOA Rockfish Program, and GOA shallow-water flatfish
>
> **Option 2:** Include all groundfish species

Methods 1 and 2 would only apply to C/Ps and motherships.

> **Method 1:** Use all basis species accumulated on the vessel when calculating MRAs for each trip regardless of fishery closures and protection areas.
>
> **Method 2:** Only use basis species accumulated after a change in directed fishing has occurred due to an inseason action or entering a protection area for the species that had a change in status for each trip.

The expected effects of the methods under Alternative 4 are discussed in Section 6.4.4.

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. 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 incidentally 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.

In addition, under Alternative 4 Option 2 no groundfish species across all vessel sectors would have an instantaneous MRA. If all species were treated the same, it would make the MRA regulations easier to understand. This option would greatly simplify the MRA regulations. It should be noted, however, that calculating MRAs at offload would likely exacerbate the issue described in Section 2.6 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 occur when unforeseen circumstances result in a trip ending prematurely because a vessel may retain a species over the basis species onboard earlier in the trip than under status quo.

Under status quo, C/Ps and motherships can be engaged in multiple, concurrent fishing trips at the same time and may have to keep track of several MRA calculations for each fishing trip. Although changing management programs does not officially trigger a new fishing trip, each management program does have to be calculated separately because there are usually different MRAs associated with each. A C/P or mothership can be engaged in one or more fishing trips and MRA calculations at any given time. In addition, the C/P or mothership has to ensure it is not over any MRA at any point in time during the fishing trip, and non-AFA vessels participating in the BSAI have to track BSAI pollock and BS Atka mackerel from offload-to-offload. C/Ps that enter the Rockfish Program in the CGOA must remember to start tracking MRAs for a weekly reporting period. Keeping track of so many different MRAs under the status quo for the duration of time at sea can be complicated, time consuming, and error prone. Both Alternatives 3 and 4 would increase the duration of a fishing trip for the purposes of MRA calculations, resulting in a reduced number of fishing trips while at sea and fewer necessary MRA calculations. This may help reduce time spent on these calculations as well as reduce overall errors.

There are several exceptions to the instantaneous MRA calculation. 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 for these species. 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 CGOA rockfish cooperative fishing quota (CQ)

permit in the CGOA 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.

Under Alternative 4, additional species would be calculated offload-to-offload. Modifying the MRA enforcement period to an offload-to-offload period in the BSAI and GOA would allow groundfish vessels that would have otherwise been required to discard valuable groundfish species caught incidentally while directed fishing due to exceeding the MRA to retain these incidental 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 enforcement 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 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. Therefore, vessels would likely retain an amount of valuable incidentally caught species that are closed to directed fishing for which they have sufficient basis species on board at the time of offloading. 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 incidentally 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.

Both Option 1 and Option 2 are expected to provide an economic incentive to harvest otherwise unavailable high valued species, up to their MRA amounts by providing greater operational flexibility during a fishing trip. Option 1 would apply MRAs at offload for only certain species, while Option 2 would broadly apply MRAs at offload to all groundfish species.

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

BSAI Pacific cod

BSAI Pacific cod is an economically valuable species for many sectors. The average ex-vessel price for Pacific cod during 2020 through 2023, which is provided in Table 3-1 through Table 3-6 and in Table 2-3, 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.

As noted in Section 3.3, 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 enforcement period for BSAI Pacific cod is expected to be positive under Alternative 4, Option 1.

GOA Pacific cod

As noted in Table 2-5, the average ex-vessel 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% 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 enforcement period for GOA Pacific cod is expected to be positive under Alternative 4, Option 1.

GOA Pollock

The average ex-vessel 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% 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 enforcement period for GOA pollock is expected to be positive under Alternative 4, Option 1

BS Skates

Retention of BSAI skates is low as reflected in Table 2-9. Information in the table shows that A80, AFA C/P, HAL C/P, and trawl CV sectors on average retained either less than 50% or slightly above 50% of their average total catch of skates. As noted in Table 2-10, 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% MRA while targeting BSAI Pacific cod and yellowfin sole under an instantaneous calculation period. As noted in Table 2-9, the average ex-vessel 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 enforcement period for BSAI skates to an offload-to-offload period under the proposed action would allow vessels that would have otherwise been required 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 enforcement period for BSAI skates is expected to be positive under Alternative 4, Option 1.

CGOA Rockfish

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%, 35%, and 15%, respectively. Given the average ex-vessel 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 2-13, the ex-vessel 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 enforcement 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 required 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.

GOA Shallow-Water Flatfish

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 ex-vessel 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 2-11). 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% MRA for shallow-water flatfish while fishing under an instantaneous calculation period in other groundfish fisheries. Therefore, modifying the enforcement period for GOA shallow-water flatfish to an offload-to-offload period under the proposed action would allow vessels that

would have otherwise been required 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 enforcement period for GOA shallow-water flatfish is expected to be positive under Alternative 4, Option 1.

Option 2 - Apply MRAs for all groundfish species at Offload

As previously noted, Option 2 would change the MRA enforcement period for all groundfish species to offload-to-offload. Compared to Option 1, Option 2 would provide additional positive economic impacts. Regulatory discards for economically valuable species would likely decrease under Option 2.

Greenland turbot is one example of a species that would likely have reduced regulatory discards under Option 2. Greenland turbot has a high retention rate and is an economically valuable species for many sectors. This species has an MRA of 1% in most directed fisheries, with the exceptions of 7% for arrowtooth flounder and Kamchatka flounder, and 35% for several rockfish fisheries, flathead sole, and sablefish fisheries. As shown in Table 3-30, the average amount of incidentally caught BSAI Greenland turbot that was discarded in the target fisheries was 58 mt. Given the average ex-vessel 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.

Under Alternative 4, Option 2 (include all groundfish species), as noted in Table 3-30 through Table 3-32 for all sectors combined and Table 3-1 through Table 3-6 for specific sectors, there are a number of valuable incidental caught species that also have high retention rates. For BSAI trawl gear, this includes Greenland turbot, Pacific cod, sablefish, Alaska plaice, Kamchatka flounder, arrowtooth flounder, flathead sole, POP (directed), and pollock. For fixed gear vessels in the BSAI, this includes Greenland turbot, Pacific cod, sablefish, pollock, and skates. For GOA trawl vessels, this includes sablefish, thornyhead rockfish, Pacific cod, Atka mackerel, rougheye rockfish, big skates, rex sole, and dusky rockfish shortraker rockfish. GOA fixed gear species include sablefish, Pacific cod, demersal shelf rockfish, thornyhead rockfish, rougheye rockfish, and shortraker rockfish. Table 6-4 and Table 6-5 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. This 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.

Table 6-3 Average first wholesale value ($) and ex-vessel price ($) 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 6-4 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 6-5 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)

6.4.5 Expected Effects of Method 1 and Method 2

The magnitude of positive economic impacts for vessels under Alternatives 3 or 4 is dependent on the value, distribution, and current MRA utilization of each species, by sector. The magnitude may also differ by the methods identified by the Council.

The Council identified two methods under Alternatives 3 and 4:

> **Method 1:** Use all basis species accumulated on the vessel when calculating MRAs for each trip regardless of fishery closures and protection areas.
>
> **Method 2:** Only use basis species accumulated after a change in directed fishing has occurred due to an inseason action or entering a protection area for the species that had a change in status for each trip.

These methods impact the "denominator" of the MRA calculation. Under Method 1 the "denominator" would be larger, meaning a greater volume of species closed to directed fishing could be retained after an inseason action or inside protection areas. Under Method 2 the "denominator" would only include basis species harvested after the change in directed fishing status has occurred, reducing the volume of species closed to directed fishing that could be retained in certain cases.

Method 1 and Method 2 are predicted to impact vessel behavior in differing ways. As described above, the volume of basis species used in the MRA calculation would be greater under Method 1 in certain cases. This would occur in cases where a change in directed fishing status occurred during a fishing trip – either due to an inseason action, or due to entering a protection area. If the directed fishing status of a valuable species was open outside of a protection area, and closed inside of this protection area, Method 2 would only allow vessels to use basis species harvested from inside the protection area in the MRA calculation. In this case, Method 2 would result in lower retention volumes inside protection areas versus Method 1. In cases where the directed fishing status for a species did not change, Methods 1 and 2 would result in the same MRA calculation. As one example, if a species was closed to directed fishing both inside and outside a protection area Method 2 would not require that vessels only use basis species from inside the protection area in their MRA calculation for this species.

Impacts to 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., SSL protection measures to prevent localized depletion near haulouts and rookeries), and acts as a deterrent to limit targeting species that are 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. This is also true for directed fishing closures issued via inseason actions. Because vessels have no ability to control or predict when these inseason action closures may occur, this analysis focuses on the changes in vessel behavior surrounding 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, or the MRA accounting period was changed to offload-to-offload for a greater number of species, 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 however the catch would be limited to the MRA. In certain cases, this may allow a vessel operator to 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.[24] 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 Sections 4.5 and 4.2.

Vessel behavior around protection areas could change under Method 1 under specific circumstances. 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.[25]. A vessel may be expected to enter protection areas under Method 1 for the purposes of topping off if: 1) this species has a high commercial value compared to other species closed to directed fishing and/or species open for directed fishing, 2) it is under the MRA for that species, 3) it expects high CPUE rates for valuable incidental catch species inside the protection area, 4) it has hull capacity for additional catch volumes, and 5) it wishes to retain additional volumes of this species.[26], among other potential factors.

The following scenarios have been highlighted as examples of potential impacts to vessel behavior under Method 1. These impacts are expressed in terms of the change in retention and discard volumes within or directly outside protection areas. An economic value for these impacts cannot be estimated, as described in Section 6.1, but the changes in retention and discard volumes suggest the potential for positive economic impacts for vessels under certain conditions. 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 it has not already retained a volume of that species in an open area that would be greater than the MRA 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

24 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."*

25 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

26 For example, as described in the 2025 Amendment 80 Program Review, vessel operators must manage an annual allocation of important "choke species," such as Pacific cod. A80 C/Ps are allocated 13.4 percent of the Pacific cod ITAC, and according to A80 owners and operators, the "hard" cap under A80, coupled with the size of the allocation, and other rationalization elements of A80, has led to the transition of Pacific cod from a target species to an incidental catch species that sometimes constrains harvest in other target fisheries. In other words, the hard-cap on Pacific cod under A80 has forced operators to manage their incidental catch of Pacific cod in ways that are similar to ways they manage halibut or crab PSC apportionments. If the allocation is met, the vessel may risk losing the opportunity to keep working later in the year in other profitable targets that have an intrinsic encounter rate.

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 6-6 Scenario 3a: Moving from Open Area (Area A) to Protection Area (Area B)

		Species X Catch Volume	MRA for Species Y	Species Y Catch Volume	Retained Species Y	Discarded Species Y
Status Quo: 2 trips	Trip 1 (Area A)	10 mt	NA	0 mt	0 mt	0 mt
	Trip 2 (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 1 (Area A)	10 mt	3 mt	0 mt	0 mt	0 mt
	Trip 1 (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 6-7 Scenario 3b: Moving from Open Area (Area A) to Protection Area (Area B)

		Species X Catch Volume	MRA for Species Y	Species Y Catch Volume	Retained Species Y	Discarded Species Y
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**

6.4.6 Expected Effects of Alternative 5

Under Alternative 5, the enforcement period for pollock MRA provisions for A80 vessels would expand to an annual basis. Annual accounting would provide greater operational flexibility, allowing an operator to balance a trip with higher pollock bycatch against subsequent, cleaner trips over the course of the entire fishing year. This enables more strategic, long-term planning and allows vessels to operate more efficiently and utilize more pollock catch in the multi-species flatfish fisheries.

Regulations for the pollock MRA, IR/IU require 100% retention of pollock. For vessels that are not allowed to participate in directed fisheries for pollock, the IR/IU regulation requires that vessels retain all pollock (with minor exceptions for damaged or contaminated fish) up to the 20% MRA. However, because they cannot be engaged in directed fishing for pollock, they may not retain any more than 20%. Prior to the implementation of an expanded enforcement period for the MRA, these competing requirements placed some operations in a potentially high-risk situation, given both requirements were "instantaneously" enforceable. So long as the retained amount of pollock were "below" the 20% threshold, no pollock could be discarded (under IR/IU), yet the vessel may not, at any point between two consecutive offloads, exceed the MRA limit. This created a balancing act, in terms of constant catch accounting, which imposed an additional compliance burden on the operator. The current offload-to-offload MRA enforcement period for pollock was expanded from instantaneous in June 2004. The primary rationale behind expanding the MRA enforcement period was to give vessels the opportunity to more effectively manage the competing requirements of IR/IU and MRA, while retaining more of their pollock if at any given point during the trip they have more pollock on board than the 20% allowed by the MRA. In other words, this expansion was expected to give vessels the ability to reduce their regulatory discards of pollock.

A shift to an annual MRA accounting system for pollock may further reduce regulatory discards. The MRA does not currently place season or yearly limitations on the amount of pollock retained by the sector. However, the sector is limited by the restriction that the catch volume of individual vessels never contains more than 20% pollock at any point in time. The effect of this regulation is to force the sector to discard pollock at various points during a trip even when they would be under the 20% limit for the entire trip. Hence, raising the MRA, or changing the enforcement period, could improve retention rates by limiting the amount of pollock discarded at any given point during a trip and increasing the amount of retained pollock.

The following analysis assumes that all pollock discards are caused by the MRA regulation. Thus, the numbers presented represent the upper limit of the potential effect of retaining more pollock on

groundfish discard rates. The annual retained harvest of allocated species[27] averaged 230,735 mt between 2020 and 2024. Therefore, an estimated maximum of 46,147 mt of pollock could be retained by the sector annually. On average, the sector retained 28,735 mt of pollock annually between 2020 and 2024, representing 12.4% of the total retained volume of allocated species. The total pollock harvested by the A80 sector between 2020 and 2024 averaged 39,809 mt, representing 17.3% of the total retained volume of allocated species. Assuming equal pollock harvest distribution between vessels in the sector, a maximum of 11,074 additional mt of pollock could have been retained on average between 2020 and 2024 under an annual pollock MRA.

While only changing the enforcement interval for the pollock MRA is likely to result in reduced discards of pollock, the overall economic impact of the change on vessels in the A80 sector is uncertain. The main factors that could determine the size and distribution of economic impact on the A80 sector are (1) the value of pollock relative to the value of groundfish normally caught by the sector, (2) the amount of pressure vessels operators are experiencing to reduce discards, and (3) strategic behavior of individual vessels. If pollock has a lower relative value than the targeted species, and vessels operate without regard to pressure to reduce discards, the change in the enforcement interval is unlikely to have any significant economic effect—vessels will continue to discard pollock at current levels, while remaining within the retention requirements of IR/IU regulations.

Based on anecdotal evidence from industry sources—there is no empirical data on processing and selling costs—retaining additional pollock appear to be a least-cost alternative for retention improvement. Pollock can be expected to generate more revenue than processing sculpins or sub-standard rock sole or yellowfin sole, for example. This is not to say however, that retaining additional pollock will in fact improve net revenues—the relative benefits of retaining pollock and possibly displacing more valuable product are not known. It has been suggested by some industry representatives that non-AFA vessels "top off" their catches with pollock at the end of a trip in order to catch more pollock up to the MRA amount. However, owners of non-AFA vessels maintain that they generally prefer not to catch pollock because it has a per unit value lower than their target species.

6.4.7 Expected Effects of Alternative 6

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. A vessel that ends its fishing trip earlier than expected may end up over the MRA for one or more species if it has not accumulated enough basis species.

Most species are subject to instantaneous MRAs, meaning that MRAs apply at any time and to all areas for the duration of the fishing trip. Therefore, there is no point in time where it would be allowable for a vessel to be over the MRA and, as a result, Alternative 6 would not apply to these instantaneous MRAs. For species with instantaneous MRAs, premature returns to port due to mechanical, medical, or weather emergencies are unlikely to result in an MRA overage under the status quo, since a vessel should always be under the MRA.

27 The total retained harvest that could be used as basis species in annual MRA calculations would be higher, and include non-allocated species. Many A80 vessels also participate in the CGOA Rockfish Program and in the GOA OA fisheries. Only retained volumes of allocated species (BSAI Atka mackerel, yellowfin sole, rock sole, flathead sole, Pacific cod, and AI POP) are used in this calculation, so that estimated reductions in pollock discards could be extrapolated to all A80 vessels.

Under current regulations, most MRAs are applied on an instantaneous basis, meaning vessels must remain within the allowable limit for incidental species at all times. However, for species like BSAI pollock and BS Atka mackerel, MRAs are calculated at the time of offload, allowing vessels to temporarily carry amounts of non-target species above the MRA during a trip, provided they are in compliance at the time of offload.

If the Council expands the use of offload-to-offload MRA calculations, as considered under other alternatives, the likelihood of an MRA overage at offload increases in the event of an emergency that results in the vessels returning to port before it intended. In such cases, vessels would have to retain all product onboard and return to fishing before offloading fish or fish product to avoid a regulatory violation. In most situations, it is economically more efficient to offload the fish or fish product onboard the vessel each time the vessel returns to port and it may also improve safety.

Alternative 6 would provide targeted exemptions in these situations, offering flexibility for vessels to offload catch without being found in violation of MRA regulations. This flexibility allows vessels to clear freezer space, return to fishing grounds sooner, and improve operational efficiency. The overall impact would depend on the scope of species subject to offload-based MRA calculations and the frequency with which these exemptions are granted.

6.4.8 Expected Effects of Action Alternatives in Combination

Alternatives 3 and 4

The differences between Alternatives 3 and 4 are nuanced. The simplest way to explain the main difference between the two alternatives is that under Alternative 3 the instantaneous MRA remains in effect while under Alternative 4 the instantaneous MRA is no longer in effect for some or all species. Alternative 3 seeks to remove all trip triggers except when all fish or fish product is offloaded or when the vessel changes authorized gear. It would not remove the instantaneous MRA. Alternative 4 would require MRAs for some species (under Option 1) or all species (under Option 2) to be calculated at the time of offload. Under Alternative 4, vessels could retain species before having basis species onboard as long as there was enough basis species onboard at the time of offload. As a result, the following trip triggers are irrelevant for any species with an MRA calculation at the time of offload: 1) 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, or 3) the end of a weekly reporting period.

If the Council decides to select Alternative 4, Option 2, it is not strictly necessary to also choose Alternative 3 since the three trip triggers would have no effect on the desired outcome of Alternative 4, Option 2. However, the Council may want to also choose Alternative 3 in this scenario in order to ensure the regulations are not confusing and that unnecessary regulations are not in place.

If the Council decides to select Alternative 4, Option 1, then the MRA calculations of species not listed as an offload MRA calculation under Option 1 would vary depending on whether or not the Council also chose Alternative 3 for final action. If Alternative 4, Option 1 is implemented without Alternative 3, then MRA calculations for species not listed as an offload species under Alternative 4, Option 1 would remain status quo with all five trip triggers remaining in place. If the Council chooses both Alternative 4, Option 1 and Alternative 3, then species not listed as offload species under Alternative 4, Option 1 will have an instantaneous MRA, but the three trip triggers that would start a new trip for purposes of MRA calculations would no longer be in effect.

Alternatives 4 and 6

If Alternative 6 were selected as part of the Council's preferred alternative, MRA overages would be permissible in cases of medical or mechanical emergencies, or poor weather. Alternative 6 would provide regulatory exemptions for vessels, therefore creating a pathway for vessels to legally offload product if an

emergency forces their return to port. As described in Section 6.4.7, it appears that unexpected returns to port due to medical or mechanical emergencies, or poor weather would be most relevant to species or vessels subject to offload-to-offload MRA calculations.

If Alternative 4 is selected, and additional species have MRAs applied on an offload-to-offload basis, it is possible that the rate of MRA overages that occur due to emergency returns to port would increase. In other words, if industry behavior changes and regulatory discards do decrease under Alternative 4, MRA violations may be exacerbated when unforeseen circumstances result in a trip ending prematurely. In absence of a new regulatory exemption, under Alternative 4, vessels would be constrained from offloading fish or fish product while in port.

Alternative 4 would result in an increased occurrence of the issue described in Section 6.4.4, if Alternative 6 is not selected in combination. Because of this interplay, the impact of Alternative 6 would be larger if selected in combination with Alternative 4 versus if selected alone.

7 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, and information describing these entities within Sections 3.1 and 3.2. The RIR 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 and 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 those 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, 4 and 5, above has identified a possibility for localized depletion in SSL protection areas for SSL prey items. 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 for a few specific species. Table 5-1 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 CAS and issuing in-season directed fishery closures and PSC status. These actions would be applied to prevent overfishing to the extent practicable.

8 Affected Small Entities (Regulatory Flexibility Act Considerations)

Section 603 of the 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, scallops, or salmon that retain GOA FMP groundfish in Federal waters (whether or not they have FFPs).

In the BSAI area, the entities directly regulated by this action include: a) entities operating vessels with groundfish FFPs catching FMP groundfish in Federal waters (including those receiving direct 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, scallops, or crab that retain GOA FMP groundfish in Federal waters (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 HAL 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 HAL 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, and potentially two motherships. 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 HAL CVs, pot gear CVs, and trawl gear CVs are estimated to be $910,000, $1.5 million, and $23 million, respectively.

In addition, the two motherships that operate in the BSAI do not individually, nor collectively, exceed the 750-employee threshold and may be considered directly regulated small entities under that threshold. However, the motherships participate in the Mothership Fleet Cooperative and participate, along with multiple large CVs in the Mothership Salmon Savings Incentive Plan agreement and would be considered large by cooperative affiliation with the CVs, as the $11 million revenue threshold applies to the affiliated entities.

Impacts to Small, Directly Regulated Entities

The analysis for this action utilizes CAS data on target species and incidental species landings, discards, retention, as well as trip level data to determine compliance with existing MRAs. The data is entity specific; however, the large or small entity determination for each directly regulated entity is not included in the CAS data. The counts of directly regulated small entities is obtained from custom data queries of databases maintained by the Alaska Fish Information Network and are primarily populated by revenue and cooperative affiliations. Thus, it is not possible for the analysis to differentiate impact for small versus large entries. However, these actions generally 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, nor are small entities expected to be more burdened by the action than large entities.

9 Alternatives with Respect to Net Benefit to the Nation

This section uses qualitative methods to estimate the potential net benefit of the action on the Nation, relative to the no action baseline. The impacts of all the alternatives, options, and suboptions are discussed broadly, and this section will be revised to reflect the Council's preferred alternative after additional input from the public and advisory bodies.

The alternatives under consideration would revise MRA regulations to clarify the definition of a fishing trip, calculations for MRAs, and applications of MRAs (Alternative 2), revise the triggers that end a fishing trip (Alternative 3), add additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors (Alternative 4), revise the calculation period for BS pollock by Amendment 80 to an annual calculation (Alternative 5), and provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that ends a fishing trip (Alternative 6).

These actions ease regulatory burden, provide more operational flexibility for the fleet, and may reduce regulatory discards. As such, the alternatives are generally beneficial and one or a combination of alternatives and options may provide Net Benefit to the Nation the scale of which will depend on which the actions taken.

10 Magnuson-Stevens Act and FMP Considerations

10.1 Magnuson-Stevens Act National Standards

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

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

The effects of the alternatives on groundfish species and stocks in the BSAI and GOA groundfish fisheries are likely neutral in most cases depending on alternatives and options. Retention of non-target groundfish would likely increase under Alternative 3 and 4, but overall harvest (retention plus discards) would likely remain neutral. It is possible that in some scenarios, due to increased retention earlier in a trip, that overall harvest could decrease, however this would not be expected to be a large decrease. As a result, the overall impact to the stocks would also likely remain neutral.

Any potential changes in volumes of incidentally-caught groundfish, as a result of the alternatives, are not expected to significantly impact incidental stocks. Existing spatial, seasonal, and harvest limit protections would continue under the considered measures. In addition, NMFS would maintain authority to close species to retention if a TAC was reached, thus ending any additional opportunity to retain a species.

For some groundfish species, the greater flexibility to "top off" for a species under Alternative 4 Option 2 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 ex-vessel 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. Although these species have a higher risk of exceeding ABC, TAC, and OFL than other species, the overall risk is not necessarily high, or certain to happen.

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

This proposed action was analyzed using the best and most recent scientific information available by reference, as well as by relying on numerous recent analyses that are 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.

This action contemplates specific changes to the management measures applying exclusively to vessels operating in the BSAI and GOA fisheries. The measures under consideration would revise 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 C/Ps and motherships, (2) adding additional species to an offload-to-offload MRA application in the BSAI and GOA for all vessel sectors, (3) revising calculation period for BS pollock by Amendment 80 to annual calculation, and (4) providing exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that end a fishing trip. This proposed action does not change the management structure or coordination of specific stocks or stock groups.

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.

This proposed action would impact vessels operating in the BSAI and GOA fisheries. The proposed action would treat all vessel owners and quota shareholders the same regardless of residency. Residents of various states, including Alaska and the states of the Pacific Northwest, participate in the major sectors affected by the proposed action. The proposed alternative would be implemented without discrimination among participants and would not affect the allocation of fishing privileges. Existing limits on excessive share accumulation would not be altered by the proposed action. Application of any potential ICAs, or other management measures under Alternative 5, would be consistent/scaled with associated monitored/extrapolated catch of the A80 sector, and would maintain conservative limits.

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.

The purpose and need for this action is discussed in Section 1.1. The action alternative could increase harvesting efficiency for vessels operating in the BSAI and GOA fisheries, by increasing opportunities to reduce regulatory discards. In doing so, this action could reduce mortality for high-value incidental species (due to discarding at the beginning of a trip and "topping off" at the end of a trip). To the extent that regulatory discards are reduced, this measure would decrease the need for additional fishing effort to maximize retention. In doing so, the action alternative is likely to increase or maintain (versus the no action alternative) fishing efficiency by easing regulatory restrictions. This could result in reductions in regulatory discards and decreased operational costs, compared to the no action alternative.

The measures under consideration would also provide exemptions to regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that end a fishing trip. Allowing targeted exemptions in these cases would offer flexibility for vessels to offload catch without being found in violation of MRA regulations. This flexibility allows vessels to clear freezer space, return to fishing grounds sooner, and improve operational efficiency.

Finally, the action alternative also serves to revise the MRA regulations to clarify the definition of fishing trip, clarify calculations for MRAs, and clarify the applications of MRAs (Alternative 2). These measures do not impact economic allocation.

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

The GOA and BSAI fisheries, and the IFQ and CDQ Programs, are structured to allow for variations in the groundfish fisheries, resources, and available catch. Action Alternative 5, which would apply BS pollock MRA provisions to A80 vessels annually, may lead to an increase in the sector's total harvest of pollock compared to the status quo, where trip-by-trip avoidance behavior may have kept the total annual bycatch below the theoretical maximum. To address any potential risk, the alternative under consideration suggests the development of a mandatory incentive plan, or other controls designed specifically to provide the necessary controls to prevent such an increase in the overall harvest. These measures would mitigate the risk of negative allocative impacts to primary pollock user groups, and support National Standard 6, to take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches.

The development of an incentive plan would establish a prescriptive solution for risk mitigation. Such a plan could include regulations to implement an approvable incentive plan for the A80 sector to contain several specific and enforceable components. Alternatively, other controls or approaches could achieve

this goal. For example, tools like annual inseason management reports and A80 cooperative reports, which provide detailed information on sector-level catch and retention, could be used to monitor pollock catch levels and assess whether behavior changes after the implementation of an annual MRA. If there is evidence of increased harvest, the Council could respond through future management action.

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

The action alternative would minimize costs by permitting vessel operators in the BSAI and GOA fisheries to increase fishing efficiency and reduce regulatory discards. Under the action alternative, operators could be able to retain valuable incidental caught species that would otherwise be discarded under the status quo.

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.

The action alternative would not reduce the potential for sustained participation of fishing communities in the groundfish fisheries off Alaska, because the alternative would not change fishery allocations or delivery patterns. Alternatives 3, 4, and 5 may impact the composition of retained catch by reducing regulatory discards and improving retention, particularly for high-value species. The magnitude of any changes in harvest composition, and increased retention of high-value species, would be minimal in nature when compared to total harvest volumes for the impacted sectors. This action would not impact harvest or retention of any target species by sector. Therefore, any impacts on communities would be minimal in nature, if realized.

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.

The management measures under consideration, specifically Alternatives 3, 4, and 5, would result in reductions of regulatory discards. To the extent that these measures provide improved opportunities to reduce discards, it is consistent with the objective of National Standard 9.

Regulatory discards fall under the MSA definition of bycatch. Bycatch includes the discard of whole fish at sea or elsewhere, including economic discards and regulatory discards, and fishing mortality due to an encounter with fishing gear that does not result in capture of fish (i.e., unobserved fishing mortality). Fish that are bycatch and cannot be avoided must, to the extent practicable, be returned to the sea alive. To minimize bycatch and the mortality of bycatch to the extent practicable, the Council is considering modifying the MRA regulations that apply exclusively to vessels operating in the BSAI and GOA fisheries. The proposed measures would allow vessels that would have otherwise been required to discard valuable incidental caught species the opportunity to retain economically valuable incidental caught species.

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

The action alternative would provide exemptions in regulation from MRA requirements in cases of medical emergencies, mechanical emergencies, or poor weather that end a fishing trip. An exemption to MRA requirements would only be needed if a vessel returns to fishing and offloaded fish or fish product. By easing this regulatory burden in cases of emergencies, as described above, this measure promotes safety of human life at sea.

10.2 Section 303(a)(9) Fisheries Impact Statement

This section will be completed after the Council selects a Preferred Alternative.

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 proposed action affects the sablefish IFQ/CDQ 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.

The EA/RIR prepared for this action constitutes a draft of the fishery impact statement that will be competed if and when a FMP amendment or regulatory package occurs. The likely effects of the proposed action are analyzed and described throughout the EA/RIR. The effects on participants in the fisheries and fishing communities are analyzed in Chapter 6. The preliminary preferred alternative is not expected to directly impact vessel safety. Based on the information reported in this section, there is no need to update the Fishery Impact Statement included in the FMP.

10.3 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. This action expands the tools available for appropriate and conservative monitoring of fishing activities, especially species caught incidentally and discarded at sea. This is directly supportive of the Council's intention to provide best data possible for scientists, managers, and the public in order to ensure sustainable fisheries for managed species and their effects on associated ecosystem components.

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13 Appendix 1

Evolution and Development 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 2.1 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[28] are listed in the timeline below.

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 used for management. For example, CV 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. In the modern era, the precision of management has been drastically increased by the availability of trip specific data.

Appendix 1a

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, August 8, 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, March 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, June 30, 1997 and correction 62 FR 38944, July 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.

28 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

1997 - 63 FR 15334, March 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, December 3, 1997 (BSAI) and 62 FR 65379, December 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, December 6, 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, September 2, 2003

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

2004 - 69 FR 32901, June 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, April 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 – A80: 72 FR 52668, September 14, 2007

- Established the A80 sector.
- Clarified GRS program requirements for A80 cooperatives

2008 - 73 FR 71592, November 25, 2008

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

2009 - 74 FR 7209, February 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 POP 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, December 27, 2011

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

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

- Temporarily exempted A80 from the GRS program.

2013 - 78 FR 12627, February 25, 2013

- Removed the GRS program for A80.
- Required annual reporting of groundfish retention performance to NMFS by A80 cooperatives.

2013 - 78 FR 29248, May 20, 2013

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

2014 - FR 79 70286, November 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, December 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, February 20, 2020

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

2024 - 89 FR 60796, July 29, 2024)

- Implemented full retention of all species on trawl vessels participating in the EM program while pollock fishing in the BSAI and GOA. Effective date was August 28, 2024; however, trawl vessels were operating under an EFP beginning in 2020.

Appendix 1b

History of MRA Calculation Intervals

Of the history of MRA changes in regulatory packages that are listed in the timeline below, 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 would be able to retain pollock in excess of the MRA for the fishing trip (as defined for purposes of MRAs) as long as the amount retained at the time of offload did not exceed the MRA with respect to all basis species retained. By allowing vessels to manage their MRA percentage for pollock on an offload-to-offload basis, more pollock may be retained than if the MRA calculation started over for each 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 A80 sector) and included several groundfish species. In October 2005, the H&G trawl C/P sector requested that the calculation interval for MRAs be changed for some groundfish species from instantaneous and fishing trip calculations to an offload-to-offload calculation. 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 discards (by increasing 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 for some species. 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.

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 from offload-to-offload for 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 species closed to directed fishing (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 and Atka mackerel inside SSL protection areas. 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 Pacific cod and Atka mackerel in the BSAI. Maintaining this 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.

The proposed rule was published in February 2009. Representatives of the H&G trawl C/P requested the rule be withdrawn indicating that the proposed rule would 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. The sector stated that the cost of the proposed action would exceed the benefits because vessel operators would find it more difficult to retain Atka mackerel and Pacific cod inside SSL protection areas. Retaining Atka mackerel and Pacific cod inside SSL protection areas could be difficult because of insufficient amounts of basis species available inside SSL protection areas. NMFS withdrew the rule in response to these industry concerns in December 2009.

3) 2014, 79 FR 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 more retention of Atka mackerel in the Bering Sea. Atka mackerel is primarily harvested in the Aleutian Islands and the Council's action intended to further disperse the harvest of Atka mackerel spatially relative to existing management measures.

4) October 2014 Discussion Paper

In December 2013, the Council initiated a paper to adjust 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. Vessels could choose to retain species that are closed to directed fishing in excess of the fishing trip MRA as long as the MRA was not exceeded at the time of offload. 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[29] on adjusting the MRA management period. After reviewing the discussion paper, the Council took no further action on the issue. The Council noted that changing the management period for all MRA species in the BSAI and GOA and the potential changes to fishing behavior was too complex to complete in one 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.

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

14 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—GOA Retainable Percentages

BASIS SPECIES			INCIDENTAL CATCH SPECIES (for DSR caught on CVs 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.*

15 Appendix 3

MRA Regulations

§ ***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 C/Ps 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 CGOA by a C/Ps 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 C/Ps 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.

16 Appendix 4

Risk of Spatial Change in Harvest Patterns under Alternative 4, by Fishery

FMP Area	Gear Type	Fishery	Other Species	Risk of Spatial Change in Harvest Patterns
BSAI	HAL C/P	Pacific Cod		NA
		Sablefish		Low to unlikely
		Greenland Turbot		Low to unlikely
	Pot C/P	Pacific Cod		Low to unlikely
		Sablefish		Low to unlikely
		Greenland Turbot		Low to unlikely
BS	AFA C/P	Pollock	NA	Low to unlikely
		Pacific Cod	NA	Low to unlikely
	A80	Pacific Cod	Pollock	Low
		Atka Mackerel		Low to unlikely
		Pollock	Pacific Cod	Low
		Flathead Sole		Low to unlikely
		Rock Sole		Low to unlikely
		Yellowfin Sole		Low to unlikely
		Sablefish		Low to unlikely
		Kamchatka Flounder		Low to unlikely
		Greenland Turbot		Low to unlikely
		Alaska Plaice		Low to unlikely
	TLAS	Yellowfin	Pacific Cod	Low to unlikely
AI*	A80	Pacific Cod	Pollock	Low
		Atka Mackerel		NA
		Pollock	Pacific Cod	Low
		Flathead Sole		No Risk
		Rock Sole		No Risk
		Yellowfin Sole		No Risk
		Sablefish		No Risk
		Kamchatka Flounder		No Risk
		Greenland Turbot		No Risk
		Alaska Plaice		No Risk
		POP	Atka Mackerel	Likely to occur low/medium risk)
	TLAS	Atka Mackerel	Pacific Cod	NA
		POP	Pacific Cod/Atka Mackerel	Likely to occur (low/medium risk)

CGOA	Rockfish Program	Northern Rockfish	Pacific Cod	No Risk
		POP	Pollock	No Risk - not fishing near SSL areas
		Dusky Rockfish		
		Sablefish		
CGOA	Rockfish Program	Rougheye Rockfish		
		Thornyhead Rockfish		
		Shortraker Rockfish		
WGOA	Trawl C/P, Rockfish	POP	Atka Mackerel	Low Risk - not fishing near SSL areas
		Dusky Rockfish	Pacific Cod	No risk
		Northern Rockfish	Pollock	Low Risk - not fishing near SSL areas
GOA (primarily Area 620)	Trawl C/P, Flatfish		Atka Mackerel	Low to unlikely - not fishing near SSL areas
			Pacific Cod	Low to unlikely - not fishing near SSL areas
			Pollock	Low to unlikely - not fishing near SSL areas
GOA	HAL C/P	Pacific Cod		Low to unlikely
		Sablefish		No risk
GOA	Pot C/P	Pacific Cod		No risk
		Sablefish		No risk
GOA	Trawl C/P	Pacific Cod		No risk

Source: NMFS In-Season Management.
Note: Although MRA regulations apply to all Alaska fisheries (groundfish, halibut, and aggregated amounts of non-groundfish species), this analysis focuses on the groundfish fisheries of Alaska because halibut and aggregated amounts of non-groundfish species are thought to be minimally impacted.
*Due to HCA, open access in the AI is limited.