

## LIMITED ENTRY FIXED GEAR FOLLOW ON ACTIONS AND FIXED GEAR MARKING SCOPING DOCUMENT

In [March 2023](#), under Workload and New Management Measure Priorities, the Pacific Fishery Management Council (Council) prioritized a series of potential management measures related to the Limited Entry Fixed Gear (LEFG) program and gear marking for pot and longline gear. To assist the Council and its advisory bodies in developing any actions, this document provides an overview of the LEFG sector (the main sector of focus of the management measures) and preliminary scoping of the items within the prioritized list, including considerations of workload, potential impacts of the items, and questions for consideration if the Council chooses to further develop these measures. Additionally, staff provides a discussion on potential pathways for moving these items forward.

### Overview of LEFG Sector

Vessels are required to be registered to an LEFG permit to fish in the LEFG sector. Each LEFG permit has a gear endorsement which designates the allowable gear type(s), longline or pot/trap ([§660.25\(3\)\(ii\)](#)), that can be used by the vessel. Meaning, if an LEFG vessel is to harvest the LEFG trip limit for a particular species or complex, it must use the gear for which it is endorsed. Specific management measures for the LEFG sector are defined at [50 CFR subpart E](#) with LEFG groundfish trip limits found under the same subpart in [Table 2 North](#) and [Table 2 South](#) and are summarized in [Table 2 of Agenda Item F.4, Attachment 1, March 2023](#).<sup>1</sup> There are two fisheries within the LEFG sector:

1. LEFG sablefish primary (tier) fishery, which is managed with tier limits ([§660.25\(b\)\(vi\)\(A\)](#)) rather than cumulative trip limits ([§660.231](#))
2. LEFG trip limit fishery, which is managed by cumulative trip limits.<sup>2</sup>

In addition to endorsed longline and pot gear, LEFG vessels can fish with non-trawl “open access gear to target groundfish, such as vertical hook-and-line” ([§660.11](#)<sup>3</sup>, [§660.330 \(b\)](#)). For clarity, OA gear is defined under [§660.11](#) as “all gear types except 1) longline or trap (or pot) gear fished with a vessel that has a limited entry permit affixed with a gear endorsement for that gear 2) Groundfish trawl.” However, if an LEFG vessel switches to an OA gear when fishing, or only fishes OA gear on a trip, crossover provisions apply ([§660.60\(h\)\(7\)](#)). This means that if vessels registered to an LEFG permit fish with OA gear at any time, they would be subject to the lower, more restrictive trip limit for that period. As a part of the Council recommendations in March 2023 on Amendment 32 (Non-Trawl Area Management Measures), LEFG vessels will be able to utilize groundfish troll gear or stationary vertical jig gear to fish up to their trip limits within the boundaries of the non-trawl rockfish conservation area (RCA). Regardless of the gear type used

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<sup>1</sup> See [§660.11 Conservation Measures 1\(vi\)\(B\)](#)

<sup>2</sup> See [Agenda Item G2, Attachment 1, June 2021](#) for a complete description of the primary tier fishery and its relationship with other fisheries, including the daily trip limit (DTL) fisheries.

<sup>3</sup> Refer to open access gear in the definitions list.

by a vessel registered to an LEFG permit, any groundfish retained while using OA gear and/or during a crossover trip would count against the LEFG allocation ([§660.60\(h\)\(7\)\(ii\)\(A\)](#)).

## Cost Recovery

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires the National Marine Fisheries Service (NMFS) to collect fees to recover the costs related to the management, data collection, and enforcement directly related to and in support of a limited access privilege program (LAPP) (16 U.S.C. § 1854(d)(2)), also called “cost recovery.” Cost recovery fees recover the actual costs directly related to the management, data collection and analysis, and enforcement of the programs (16 U.S.C. § 1853a(e)); these costs are referred to as incremental costs. During the initial 2014 program review, NMFS assessed incremental costs outside of fees recovered through the permit fee and concluded that “while some recoverable costs were identified within the West Coast Region, most of the divisions within NMFS that worked on the Program generated no incremental costs at that time.” ([Agenda Item D.2.a, NMFS Report, June 2015](#)) NMFS noted that future actions could impact this decision and it would be important to revisit the decision at a later date.

After the conclusion of the [2022 program review](#), NMFS reviewed what management, data collection and analysis, and enforcement tasks are incremental to the program and provided a summary table in [Agenda Item E.4.a, NMFS Report, March 2022](#). Several tasks were identified as incremental tasks that are core LAPP elements and would be subject to cost recovery. Past costs for years prior to the implementation of a cost recovery program would not be recoverable per agency policy, including the costs associated with developing the infrastructure to implement the elements.

In March 2023 [under NMFS Report 1](#), NMFS recommended “the Council consider vessels registered to a limited entry sablefish endorsed permit that make sablefish landings accruing to a tier during the primary season as the entity responsible for cost recovery fees.” While the Council could consider setting up a cost recovery system similar to the [shorebased individual fishing quota \(IFQ\) program](#) using monthly payments through first receivers, NMFS also suggested the Council could consider having vessels pay on a yearly basis, reducing the administrative burden and would not involve first receivers (which are not a current element of the tier program). Additionally, NMFS recommended “only the sablefish caught and landed under a tier permit be subject to fees, with careful consideration of trips that cross both the primary fishery and the limited entry trip limit fishery sectors, following the requirements at (50 CFR 660.232(a)(2)).” Fishery value and cost recovery fee percentage would be calculated similar to the shorebased IFQ program and could be announced prior to the season start date.

## Workload

NMFS Report 2 outlines a draft cost recovery program structure for the Council and stakeholders to consider. If desired, that proposal along with any modification or additions could be developed by staff into an ROA for adoption at the next meeting in which this item is considered. It’s expected that this action would require a Fishery Management Plan (FMP) amendment and regulations to implement the requirements, including a mechanism for fee payment and collection from the industry.

## Removal of Base Permit

The base permit designation dates back to the development of Amendment 14 to the Pacific Coast Groundfish FMP. As described in [Agenda Item E.4.a, NMFS Report 2, March 2022](#), the provision was originally intended to assist in the administration of gear restrictions and length restrictions under consideration; most of which were ultimately not adopted. In order to operate in the primary tier fishery, vessels must be registered to a limited entry permit with a sablefish endorsement that is within five feet of the vessel length (i.e., endorsement length may be at maximum five feet shorter or longer than the vessel length; 50 CFR 660.25(b)(3)(iii)(B)(1)).

Regulations at 50 CFR 660.25(b)(3)(iii)(C) describe that NMFS designates the base as the permit registered to the vessel for the longest period of time so long as its length endorsement is sufficient for the vessel and unless the vessel requests a different permit. However, it was highlighted during the 2022 program review that the information on the base permit is incomplete, and the length requirement is already covered by a separate regulation within §660.25(b)(3)(iii), subpart C. Therefore, the base permit designation is not necessary to enforce the length requirement. NMFS indicated that the designation of the base permit creates an unnecessary administrative burden on fishery participants and NMFS staff.

### Workload

Overall, the removal of the base permit would likely have limited analytical workload and would have positive benefits for NMFS staff. There would be no associated costs to industry. This action would be a regulatory amendment and require minor changes to Federal regulations. This action may require changes to the groundfish FMP.

## Allow longline endorsed permits to use slinky pots

During the development of Amendment 6, which implemented the limited entry program, the goals and objectives included reducing capacity with the least disruption to current fishing practices, accommodating historical participation and investments, and reducing conflicts between user groups. Several components of the program aimed at achieving that objective, including limiting the number of vessels in the fishery and putting constraints on the increase in capacity of individual vessels. Gear limitations through gear endorsements were seen as a way to meet the objective by preventing vessels from being allowed to switch from a less powerful to a more powerful gear (e.g., longlining to trawling- as noted on page 3-3 of Amendment 6). For the gear endorsements, the limited entry committee (LEC) described three potential approaches in their final report to the Council that were considered to deal with the complexity of the fishery:

- “1. Issue a separate permit for each gear, allowing expansion of vessel numbers as vessels issued multiple permits sell some of their permits.
2. Issue a single permit which allows harvest with any of the three gears, allowing expansion of effort as vessels switch from less productive to more productive gears.
3. Issue permits which are good only for certain gears; create one permit for each vessel covering the gear historically used by the vessel.” (page 4-2)

The LEC ultimately recommended option 3, which was the most complex but anticipated to be the most effective of the three options in that it controlled “two aspects of effort: the number of vessels and type of gear used.”

Under this option, the Council considered whether there should be a single “fixed gear” endorsement or separate endorsements for longline and pot gears. While this would have provided more flexibility to fixed gear vessels and be consistent with how sablefish are allocated, ultimately, the Council chose to keep the endorsements separate for two reasons that were cited in [Amendment 6](#): 1) Greater constraint on capacity and 2) The connection between the two fixed gear types did not appear to be stronger than those using pot and trawl gears. On the latter point, during the period analyzed by the LEC (1984-1986), there were two times as many vessels that had at least one landing with trawl and pot gear compared to longline and pot gear.

The issuance of separate gear endorsements was intended “to minimize opportunity for expansion of effort... Allowing unrestricted movement between these gears could result in increased harvest capacity directed toward a given species. Movement and flexibility is allowed through the ownership of a permit with more than one gear endorsement or purchase of a second permit. Flexibility achieved through the latter means will help reduce capacity, making the program more effective.” (page 99)

The Groundfish Advisory Panel (GAP) recommended that vessels registered to longline endorsed permits be able to use slinky pots, which are lightweight collapsible pots currently used in Alaska to avoid whale and other marine mammal depredation as a follow-on action of the tier fishery review. While the review was specific to the LEFG primary tier fishery, this measure is proposed to be applicable to all LEFG permits endorsed for longline gear, which represents the majority of LEFG endorsements (Table 1). Currently, for vessels registered to those permits authorized for use with pot gear, slinky pots would be permitted. For vessels registered to only longline endorsed permit(s), vessels could fish with slinky pot in the open access trip limit fishery, subject to any crossover provisions described above, but not while in the sablefish tier fishery (50 CFR 660.25(b)(3)(ii)).

Given the changes in fisheries management since the implementation of the LE program and the desire for flexibility in the face of climate change and other constraints, it raises the question of should the gear allowances just be extended to slinky pot or should gear endorsements be removed altogether? Understanding how LEFG vessels currently operate with multiple gear types and may operate in the future under this management measure is something the Council should consider.

#### [Current and Future LEFG Trends](#)

In 2022, the number of vessels in the LEFG and primary tier sablefish fisheries that were permitted to use both longline and pot gears for some period within the year (at the same or different time; 18 vessels, Table 2) was more than the number that harvested fish (“active vessels”) using both gears (9 and 6 respectively). Of the 18 vessels registered to both gear endorsements, the majority chose to only utilize one gear whether in the general LEFG fishery or the primary tier fishery. This may be due to target strategies employed by the vessel or the cost of needing to change gear configurations on the boat. As described below, slinky pots are able to utilize the same rigging as

longline set ups which may increase the number of vessels utilizing pot gear or both types of gear in the future.

Table 1: Number of LEFG endorsed permits by gear type and number of permits with a sablefish endorsement by gear endorsement.

<b>Gear Endorsement</b>	<b>Number of Permits</b>	<b>Registered a/</b>	<b>Number with Sablefish Endorsement</b>	<b>Registered b/</b>
Longline	191	160	132	129
Pot	28	27	28	28
Longline and Pot	4	4	4	4

a/Registered for full year. There were 23 permits that were registered for part of the year (22 longline, 1 pot) and the remaining 9 longline permits were latent (i.e., not registered to a vessel for the entire year).

b/ Registered during the primary season.

Table 2. Number of vessels registered to a LEFG permit and LEFG permits with sablefish endorsements by gear type and the number of vessels that actively fished in 2022 by gear type utilized.

<b>Gear</b>	<b>LEFG</b>		<b>Primary</b>	
	<b>Number of Vessels Registered</b>	<b>Active Vessels</b>	<b>Number of Vessels Registered</b>	<b>Active Vessels</b>
Longline Only a/	123	85	67	58
Pot Only	9	12	9	10
Combination b/	18	9	18	6

a/ Gear types on fish tickets outside of pot and longline gear, such as troll gear, were included in the “longline” category.

b/Includes vessels registered to a dual FG endorsed permit.

There are a few considerations that would need to be explored as part of this issue that are briefly summarized here for the Council and its advisory bodies to consider.

### Conservation

Using pots rather than hooks could reduce catch of non-target species or reduce the potential for certain protected species interactions. However, it’s unclear if vessels currently registered to longline endorsed permits would intend to replace all or most of the longline gear they annually use with slinky pots. If this is the case, then the action could have some conservation benefits. Reducing the amount of hook and line gear being used annually could reduce the potential for predation and the potential for interactions with protected species, mainly seabirds and marine mammals that dive to predate on bait or hooked target species. In addition, unmarketable (e.g., juvenile or undersized fish) or non-target species mortality could be reduced if pots were used rather than longline gear due to selectivity of pot gear ([Agenda Item E.4, Public Comment, March 2022](#)).

Outside any potential switch in gear use, it’s unclear if effort would increase or shift to areas that are more suitable for pot gear versus longline gear. Any increase in effort or spatial shifts due to the use of slinky pots could cause an increase in the potential for interactions with protected

species, mainly marine mammals. Currently, pot and longline vessels use two buoy lines to mark the position of their gear. If longline vessels switch to slinky pots and the number of sets per trip increase (due to the ability to store more pots per vessel), then an increase in the number of sets and vertical lines in the water will increase the potential for marine mammal interactions, particularly whales. However, if the Council moves this measure forward, they could consider allowing only one vertical line with a buoy per string as part of the range of alternatives, rather than two (with two remaining an option), which may help reduce the potential for interactions.

Slinky pots are much lighter than traditional steel pots. Therefore, a line of slinky pots (could be 15 up to 40 per string based on anecdotal information) would need additional weights to ensure the gear doesn't drift in strong currents or tangle on rocks, potentially causing gear loss. It's unclear if gear loss would increase with increased use of slinky pot; however, an increase in gear loss could cause "ghost fishing" and habitat impacts for a period of time until gear biodegrades.

### Economic

In considering the allowance for slinky pots for longline endorsed permits, there are several economic factors the Council may want to consider and solicit feedback on from stakeholders.

#### Permit Prices

Allowing longline permitted vessels to use one of the same pot gears that could be used by pot permitted vessels may impact permit prices, depending on the relative profitability (ex-vessel values minus costs) for each gear type (traditional pot, slinky pots, and longline). Presumably, slinky pots would only be adopted by the longline permitted vessels if they provided certain advantages. Those advantages would make the longline endorsed permits more desirable and therefore likely increase their price. There could also be changes in the value of pot endorsed permits. If slinky pot gear generates profits that are equal to or higher than those available with traditional pot gear, allowing the use of slinky pots by longline permitted vessels could reduce the prices paid for pot permits. One of the difficult to predict factors is the ex-vessel price impact of an increase in the amount of pot gear caught sablefish on the market (with a corresponding decrease in the amount of longline caught fish). Any changes that cause ex-vessel price reductions could reduce the value of permits, depending on corresponding changes in fishing costs.

During the last two program reviews, it was noted that there is limited information available on permit prices to determine trends over time. The 2020 review was able to provide some insight into trends using data from Dockstreet Brokers. However, there were too few transactions to develop any conclusions regarding differences between pot gear and longline endorsed permits, and that issue still remains with the permit price reporting item (discussed below) still yet to be implemented.

Based on Dockstreet Brokers and fish ticket data, there appears to be a trend in the ex-vessel price per pound that vessels receive that is similar to the price paid for the permit per pound of quota over the time series analyzed ([Figure 8 of 2022 program review](#)). While sablefish (the primary species targeted by LEFG vessels) typically receives a higher price per pound when caught by longline gear compared to pot gear (Table 3), whether that makes longline-endorsed permits more valuable than comparable pot permits depends on differences in fishing costs between the two

gears. Note that due to confidentiality, price per pound for sablefish south of 36° N. lat. caught by LEFG vessels could not be stratified by gear type; however, the same trend is present.

Table 3. Price per pound by gear type (\$2022) in the LEFG and Primary Tier fisheries for sablefish, 2017-2022.

Sector	Gear a/	2017	2018	2019	2020	2021	2022
LEFG N	Longline	3.42	3.01	2.88	2.48	2.40	2.26
	Pot	2.97	3.29	2.43	2.22	2.04	1.71
LEFG S	All	3.22	3.07	3.22	2.97	2.90	2.77
Primary Tier	Longline	4.11	3.21	2.66	1.82	2.16	2.40
	Pot	4.10	2.95	2.39	1.66	1.68	2.05

a/ 11,835 lbs. of sablefish were associated with LEFG vessels but caught with gears other than Pot or Longline/Hook and Line gears. These landings were included in the “LGL” category.

### Gear Investments

While slinky pots may require an investment by interested vessels, the costs of the gear are relatively low compared to other gear investments. As noted in a [2021 article in National Fisherman](#), the pots run between \$75 to \$100, but can “run on the same ground line they use for hooks and do not need expensive new haulers or hydraulics.” Additionally, there may be some operational cost savings depending on the operational structure of the vessels. Vessels in Alaska have been able to go down to fewer crew with slinky pots compared to standard, heavier pots, resulting in overall higher profit margins per vessel. There is a potential to fish more pots since slinky pots take up less space on a deck and are stackable, potentially resulting in additional pots and strings being fished. This could create more efficient fishing activity and increase the amount of harvest per trip. Slinky pots have also been found to limit depredation by whales on bait (up to 50 percent savings according to the 2021 article in National Fishermen) and target species, which results in higher profits to participants.

### Workload

Overall, slinky pots may provide several benefits to both industry and the environment. However, it’s important to examine the existing policy for gears endorsements and the reason for the separation of the allowable gears, pot versus longline, in the LEFG fishery. Further discussion is needed to understand the implications of allowing slinky pots to be used by longline fisherman and the conservation and management need along with benefits and trade-offs including environmental impacts and impacts to fishery/permit value. Additionally, there would need to be discussions surrounding regulations on slinky pot configuration between industry and enforcement. This measure would require a regulatory amendment and possibly an FMP amendment.

### Questions for Council Consideration

1. What is the need for allowance of slinky pots by vessels using longline endorsed permits? Conservation, flexibility, efficiency, etc.?
2. Should the Council consider removing the specific gear endorsements (i.e., longline or pot) and allow vessels to use the most efficient type of fixed gear for the target species? Or should the gear allowance be extended to all legal non-trawl gear (similar to gear switching vessels in the shorebased IFQ program)?

## Allowing for fourth stacked permit for owners without an owner-on-board exemption

In the tier program, no individual person, partnership, or corporation in combination may own or hold more than three sablefish-endorsed permits. Vessel owners that have permits that are registered to their vessels are considered to hold (control) the permit.<sup>4</sup> A key component of the LEFG tier program is the owner-on-board provision, which limits permit ownership to individuals and requires that any person who owns or has interest in a sablefish endorsed permit be on board the vessel registered for use with that permit when it is harvesting sablefish against that permit's cumulative landing limit. This was intended to "preserve the social and historic characteristics and practices in the fishery or to encourage the flow of fishery benefits into fishing communities." It also works together with the three-permit stacking limit to distribute fishery benefits among entities within and across communities.

Under Amendment 14, the Council granted exemptions to the requirements in order to allow corporations, partnerships, and other entities that owned permits prior to November 1, 2000 to continue to own permits and not be present onboard the vessel when fishing the permit's tier. These exemptions are specific to the permit owner (not the permit they own); and the exemptions expire over time with changes in ownership of the corporation or partnership (i.e., addition of new owners but not subtraction of owners from partnerships, corporations, etc.) or the divestiture of tier permit(s) for a period of time. [Figure 13 of the 2020 Review](#) shows the number of exempted owners and number of permits registered to exempted owners over time from 2000-2020. While both numbers have been steadily declining, the number of permits registered to exempt owners is not declining at the same rate as the number of owners, suggesting that more permits are owned by entities with exemptions.

Under this management measure, a fourth permit could be stacked on a vessel as long as the owner of the permit was on board the vessel. In other words, an entity with an owner-on-board exemption would not be able to stack their permit as a fourth permit on a vessel. In their March 2022 report, the GAP described how this measure is intended to allow for crew members on board a vessel currently registered to three permits to buy into the fishery ([Agenda Item E.4.a, Supplemental GAP Report, March 2022](#)). While this would provide a lower barrier of entry into the fishery compared to the status quo, there also could be increased consolidation in the fishery, with more quota being able to be landed on one vessel. The 2020 review noted that there have been some changes in consolidation since the previous review, with more vessels stacking three permits; however, trends are within the range seen at the beginning of the program. Over the time series examined by the 2020 review (2014-2020), typically a quarter to a third of vessels registered to a tier permit(s) annually have the maximum of three permits stacked (see [Table 6 of the 2020 Review](#)). For vessels

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<sup>4</sup> Vessel owners may be granted an exemption for situations in which all of the following apply: they have no more than 20 percent ownership interest in a vessel registered to the sablefish endorsed permit, the vessel owner currently has ownership interest in Alaska sablefish individual fishing quota, and the vessel has fished in the past 12-month period in both the West Coast groundfish LEFG fishery and the Sablefish IFQ Program in Alaska. This exception was created to address a situation in which West Coast vessel owners that wanted to fish their Alaska IFQ on a different vessel had to take at least 20 percent ownership of the Alaska IFQ vessel. If that Alaska vessel also had a West Coast LEFG permit, then that permit would count against their three-permit total. There have been only two exemptions granted since 2017.



without three stacked permits, there would be nothing preventing a crew member from purchasing a permit and fishing it on the vessel currently- as they would already be required to be on board.

While not a specific proposed action under this package, the 2020 LEFG review included a recommendation to prepare a report clarifying the owner-on-board exemption requirements to determine if regulatory or data system changes are needed. The NMFS Office of Law Enforcement would likely be the best entity to develop this report and would be important to have in place with this management measure.

Overall, this management measure may result in some consolidation of permits onto fewer vessels. Yet, as noted in the 2020 review, “flexibility in the entry and exit of vessels into the fishery is an important consideration with respect to changing demographics. As the participants in the fleet age, new entry will be important for maintaining the character of coastal communities and providing opportunities for those leaving to recoup their investments (Cramer et al., 2018).” By offering crew members or family members the opportunity to own a permit without the cost of owning a vessel, it could provide that new entry opportunity.

### Workload

The allowance of a fourth permit would be a fundamental change to the LEFG primary tier program and would need to consider impacts related to National Standard 4 (allocations), National Standard 8 (communities) and other standards. Specifically, with regards to National Standard 4, there would need to be an evaluation of whether allowing this stacking of a fourth tier would be fair and equitable, promote conservation, and avoid excessive shares. In terms of administrative workload, this would require changes to the LEFG enforcement reports and NMFS systems. This measure would require a regulatory amendment, but not an FMP amendment.

### Questions for Council Consideration

1. Are there other management measures that may provide opportunities for new entrants into the primary tier fishery?

### Allowing cumulative non-sablefish limits by primary tier vessels

While the stacking of permits allows primary tier vessels to harvest sablefish up to the cumulative amount allowed by the sum of the stacked permits’ tiers, if vessels retain other species, each vessel is held to the per-vessel LEFG limits in the area and time that they are fishing. Any catch in excess of that limit would have to be discarded. Under this proposal (as described under item *e* of [GMT Report 1](#)), a vessel would be permitted to harvest a separate cumulative LEFG limit for each tier permit registered to the vessel. For example, if a vessel has two tier permits registered to it, that vessel would be able to land twice the trip limit for each non-sablefish species in a given period.

To provide the Council with a preliminary look at this proposed management measure, staff examined cumulative landing limit attainments for shortspine thornyhead north of 34° 27’ N. lat (“shortspine”) and lingcod. These species were highlighted by industry as species in which the cumulative landing limits were typically reached by tier vessels resulting in regulatory discards(pers. comm. Bob Alverson, Scott Hartzell).

## Shortspine

From 2017-2022, few tier vessels have historically come up against the cumulative landing limit for shortspine. Figure 1 below shows the proportion of individual vessels based on the percentage of the cumulative landing limit of shortspine they landed in each bimonthly period from 2017-2022. Note that this potentially includes trips after a vessel completed their tier within a period (i.e., fishing sablefish against just the cumulative landing limit permitted for LEFG). Most tier vessels participating in a given period landed less than 50 percent of the bimonthly limit.

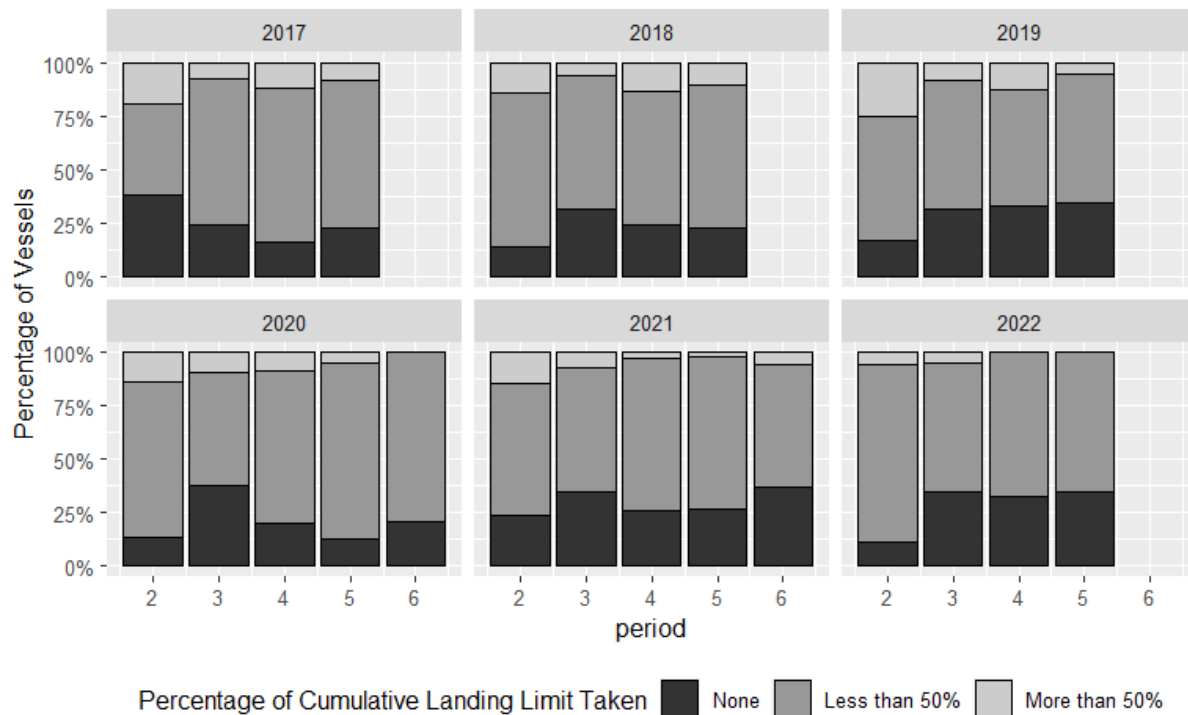


Figure 1. Percent of shortspine north cumulative trip limit taken by participating primary tier vessels by period, 2017-2022.

Over this six-year period, on average, 6.4 percent (or about five vessels) of participating primary tier vessels annually have taken more than 75 percent of the shortspine limit in a given bimonthly period. (Table 4) While some vessels have landed this higher percentage amount in multiple periods, most vessels only reach this threshold once per year. The higher attainment also typically occurs in periods 3 and 4 (May-August).

Table 4. Number of primary tier vessels and the number of tier vessels that took more than 75 percent of the shortspine north cumulative landing limit in any period from 2017-2022.

Year	2017	2018	2019	2020	2021	2022
Number of Primary Tier Vessels	85	85	83	74	74	74
Number with at least one period taking 75%+ of the shortspine trip limit	10	8	4	5	4	0

While it does not appear that there are many occurrences of vessels reaching the cumulative limit for shortspine, it is also difficult to assess the amount of discards that can be attributed as regulatory discards versus discards for other reasons (e.g., size or condition) as the fishery is not 100 percent observed. However, some information from the West Coast Groundfish Observer Program (WCGOP) can be used to determine the overall volume of discards occurring across the fleet. From 2017-2021, it is estimated that discard mortality in the primary tier fishery ranged from approximately 1,500 pounds in 2020 to over 10,400 pounds in 2018. Discard mortality accounted for between 4.5 and 14.5 percent of overall mortality in the same time period.

For those vessels that do reach the cumulative limit and are required to discard, it could result in lost economic opportunity. For shortspine, vessels fishing in the tier fishery have averaged a price per pound of \$4.21 (\$2022 dollars) from 2017-2022, with yearly averages ranging from \$3.45 to \$5.12. This is higher than what vessels are typically receive for sablefish in the tier fishery (Table 3). It is possible that by allowing multiple landing limits to be harvested by tier vessels there could be some increases in targeting of shortspine due to its value. Yet, given the low attainment of current limits, participating vessels may not have a market or need to catch shortspine.

#### Lingcod

Lingcod is managed north and south of 40° 10' N. lat. (lingcod north and lingcod south) but since 2019 has operated under three separate trip limits- north of 42° N. lat., between 40° 10' and 42° N. lat. and south of 40° 10' N. lat. Vessels participating in the LEFG fishery would be subject to the crossover provisions if fishing in multiple areas. In other words, even though lingcod is managed north of 40° 10' N. lat., they would be held to the smaller of the two limits in that area if fished in both areas.

Similar to shortspine north, few vessels appear to harvest the cumulative limits available to LEFG vessels for lingcod. Figure 2 below shows the same information as Figure 1 above, except for lingcod. Note, due to confidentiality, lingcod north and south were combined; however, the overall trends for both areas are the same.

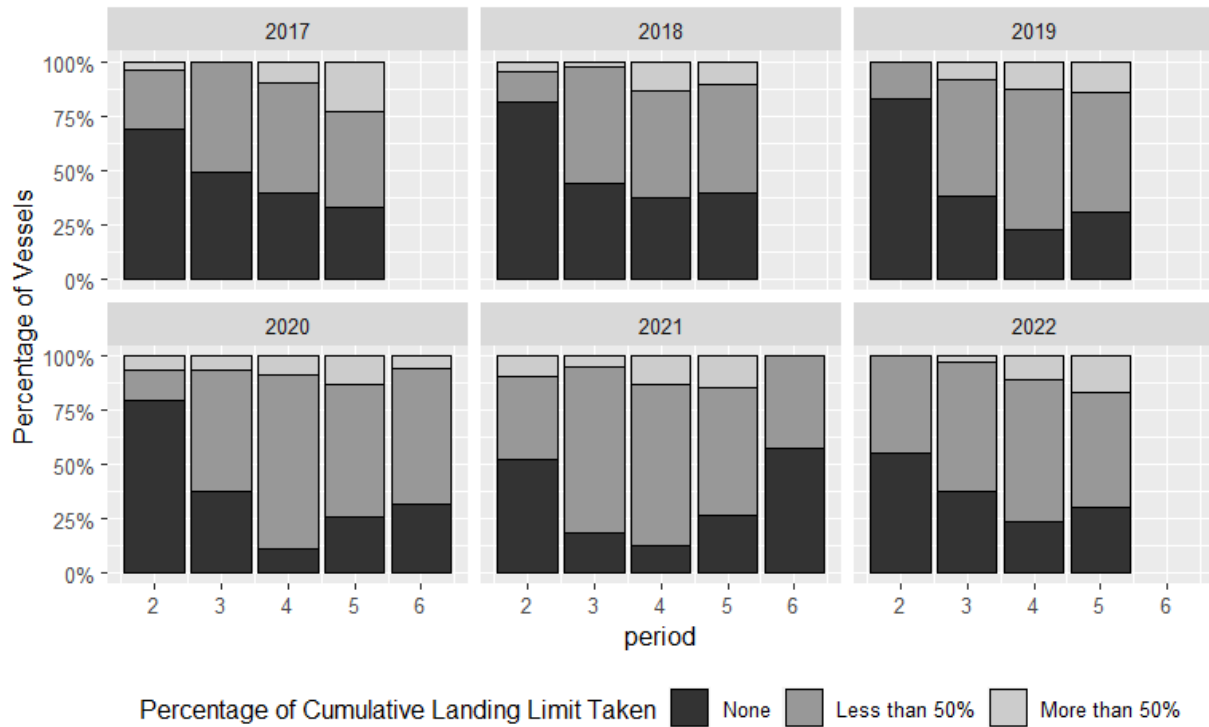


Figure 2. Percent of lingcod (north and south combined) cumulative trip limit taken by participating primary tier vessels by period, 2017-2022.

Compared to shortspine north, a higher proportion of vessels take more than 75 percent of the cumulative limit for lingcod annually (10 percent or about eight vessels; Table 3). These occurrences also typically happen in period 5 (September-October). Participants that historically take higher amounts of the lingcod limit tend to only harvest more than 75 percent in a single period, with fewer than three vessels exceeding that threshold in multiple periods within a year over the six-year timeframe.

Table 5. The number of primary tier vessels and the number of tier vessels that took more than 75 percent of lingcod cumulative landing limit in any period from 2017-2022.

Year	2017	2018	2019	2020	2021	2022
Number of Primary Tier Vessels	85	85	83	74	74	74
Number with at least one period taking 75%+ of the lingcod trip limit	9	8	5	8	10	7

Again, it is difficult to assess how much regulatory discard is occurring versus discarding due to other reasons (e.g., size). For lingcod north, discard mortality has ranged from 309 pound in 2017 to a high of 4,337 pounds in 2020 and was between 1.4 and 12.1 percent of the total mortality from 2017-2021. There has been limited to no observed discards of lingcod south in the primary tier fishery since 2017, with a maximum of 373 pounds in 2019; yet this was also 20 percent of the total mortality. There were no estimated discards in 2018 or 2020 in the primary tier fishery.

Prices for lingcod south tend to be higher for lingcod north on average, with primary vessels receiving \$2.06 per pound (\$2022) for lingcod south compared to \$1.98 for lingcod north. While not as valuable as shortspine north, this pricing is competitive to sablefish in recent years (Table 3). With the non-trawl RCA boundaries changing and yelloweye rockfish (a main constraint to accessing lingcod) continuing to rebuild, vessels may be able to access more lingcod in future.

### Enforcement and Catch Accounting

As noted in the GMT report, “since the ability to stack trip limits based on the number of permits owned would multiply landings per permit, there could be catch accounting concerns and enforcement issues.” In recent years, reports have been developed for enforcement agencies to more effectively track primary tier landings across participating vessels (accounting for permit transfers); however, this proposed allowance would require a similar reporting process to be developed for the other trip limit species. Additionally, the GMT would need to consider the resulting changes to trip limit models for various species.

### Impacts to Other Sectors

While this management measure would be targeting primary tier vessels and increasing their opportunity, it is important to consider the impacts on other non-trawl sectors. Sablefish north of 36° N. lat. is the only groundfish species in which there is a distinct allocation for the primary tier, LEFG trip limit, and OA fishery sectors. Most other groundfish species caught in the non-trawl sectors are only managed within the broader non-trawl allocation or have all groundfish catch count towards a single fishery harvest guideline. The only exceptions for where there are further defined allocations are yelloweye rockfish, canary rockfish, and bocaccio rockfish south of 40° 10’ N. lat. Therefore, any additional take by primary tier vessels would potentially impact other non-trawl sectors, both commercial and recreational.

Looking at the two example species from above, non-trawl allocation attainments have varied in the last five years. Shortspine north is an Amendment 21 species with a formulaic allocation where the non-trawl sectors combined are allocated five percent of the harvest guideline. Non-trawl attainment has ranged from 43 to 83 percent from 2017-2021 (Table 4; 2022 total mortality not available at time of this report).

Table 6. Harvest specifications and non-trawl mortality and attainments for shortspine north, 2017-2021. Source: GEMM.

<b>Year</b>	<b>ACL</b>	<b>HG</b>	<b>Non-Trawl All.</b>	<b>Non-Trawl Mortality</b>	<b>Non-Trawl Attain</b>
2017	1713	1654	83	65.7	79.4%
2018	1698	1639	82	67.7	82.6%
2019	1683	1618	81	50.9	62.3%
2020	1669	1604	80	34.5	43.0%
2021	1428	1350	67	36.2	53.6%

Lingcod north of 40° 10’ N. lat. is also an Amendment 21 species with a formulaic allocation of 45 percent non-trawl and 55 percent trawl. As part of the 2019-20 harvest specifications, lingcod

south was changed from an Amendment 21 species with a 45 percent trawl allocation, 55 percent non-trawl allocation into a biennial allocation species. Since 2019, the non-trawl sector has been allocation 60 percent. Lingcod non-trawl allocations and attainments vary significantly by management area. North of 40° 10' N. lat., the stock size is larger resulting in larger allocations and attainments ranging from 17.2 to 34.8 percent whereas south of 40° 10' N. lat. attainments have ranged from 41 to 76 percent of allocations that range from 20 to 50 percent less than those for lingcod north. For lingcod north, trip limits have been increased numerous times over the time series- particularly for lingcod north of 42° N. lat. Lingcod south saw a decline in ACLs and allocations through 2020 with more restrictive management measures for commercial and recreational sectors put into place.

Table 7. Harvest specifications and non-trawl mortality and attainments for lingcod north, 2017-2021. Source: GEMM.

<b>Year</b>	<b>ACL</b>	<b>HG</b>	<b>Non-Trawl All.</b>	<b>Non-Trawl Mortality</b>	<b>Non-Trawl Attain</b>
2017	3333	3055	1680	517.7	30.8%
2018	3110	2832	1557	541.3	34.8%
2019	4871	4593	2526	524.9	20.8%
2020	4541	4263	2345	453.2	19.3%
2021	5369	5091	2780	481.2	17.2%

Table 8. Harvest specifications and non-trawl mortality and attainments for lingcod south, 2017-2021. Source: GEMM.

<b>Year</b>	<b>ACL</b>	<b>HG</b>	<b>Non-Trawl All.</b>	<b>Non-Trawl Mortality</b>	<b>Non-Trawl Attain</b>
2017	1251	1242	683	518.5	75.9%
2018	1144	1135	624	400.3	64.1%
2019	1039	1028	565	310.7	55%
2020	869	858	472	230.8	48.9%
2021	1102	1089	653	265.5	40.6%

If the Council keeps this item within the range of alternatives, further examination of non-trawl allocation attainments would need to be analyzed for the broader suite of species. It is also important to consider future fisheries changes, including the opening of the non-trawl RCA and allowance for non-bottom contact gear types within the non-trawl RCA, on how attainment trends may change.

### Workload

Analysis of this management measure would require further examination of non-trawl allocation attainments for a broader suite of species and the potential allocational effects of allowing LEFG participants to take multiple non-sablefish limits. Any associated trip limit models used by the GMT would also have to be modified to account for this allowance. There would also need to be discussions with enforcement regarding catch accounting. Cumulative limits are tracked to the

vessel and this management measure would create individual vessel limits by monthly or bimonthly periods (depending on the number of permits registered and the transfer of those permits inseason)- leading to increased complexity in monitoring this fishery. The Council could consider implementing a second set of trip limits for the LEFG primary tier fishery that would apply to all tier vessels that would be higher than those without a sablefish endorsed permit. This might be simpler to manage as it would just classify a vessel's landing allowance based on the presence of a sablefish endorsed permit rather than a non-sablefish endorsed permit- however, this may lead to equity concerns across participants that have one permit versus three permits and be counter to the proposed objective. This item would require a regulatory amendment.

#### Questions for Council Consideration

1. What is the purpose and need of this management measure? Is it to provide additional opportunity, reduce regulatory discards, or other reasons?
2. Are there other pathways to provide additional landing opportunities for those reaching the limit (e.g., increasing trip limits for all LEFG)?
3. Would the ability to take multiple cumulative landing limits only apply during the tier season (April-December) or would it be year-round?

#### Permit Price Reporting

This item was initially recommended by the Scientific and Statistical Committee (SSC) during the 2014 LEFG Catch Share Program Review ([Agenda Item F.6.b, Supplemental SSC Report, June 2014](#)). In order to gain further insight into the LEFG primary tier fishery, the SSC proposed the routine collection of permit sale prices, which would help to indicate the market value of the fishery. These data would also help evaluate the performance of the tier system during the MSA required LAPP review, contrast performance of this program with that of the trawl catch share program and assess impacts of provisions of the trawl catch share program on those vessels that move between the fisheries. This was also included in the recommendations from the 2022 Program Review.

#### Workload

This action would likely have limited analytical workload but would require work by the Economic Data Collection program and permit owners. However, this data would be helpful in future reviews or when analyzing economic impacts from potential changes to the fishery requested under the LEFG Catch Share Program Review. For example, if this data collection were already in place, it may have provided some insight into the impacts to fixed gear endorsed permits with the allowance of slinky pots discussed above.

#### Fixed Gear Marking

On October 26, 2020, NMFS finalized a biological opinion (BiOp) titled "[Continuing Operation of the Pacific Coast Groundfish Fishery, Reinitiation of Consultation – Humpback whale](#)." The BiOp requires that the Council consider the findings of a feasibility report for potential changes to pot gear marking regulations for Pacific Coast groundfish fisheries under the groundfish fishery management plan (FMP) by March 2024.

Therefore, during the [March 2023](#) Council meeting, the Council reviewed two NMFS reports regarding a gear marking workshop conducted via Sea Grant, *Improving Gear Marking in the U.S. West Coast Sablefish Pot Fleet* ([NMFS Report 1](#)) and *NMFS Sablefish Pot Gear Marking - Feasibility Report* ([NMFS Report 3](#)). NMFS Report 1 focused on soliciting input from the industry regarding feasible and practical improvements to gear marking in the sablefish pot gear fishery off the U.S. West Coast to improve NMFS’ ability to identify the source fishery of large whale entanglements. A secondary goal was to gather ideas and input on potential measures that could reduce whale entanglement risk.

The March 2023 NMFS Report 3 provides a summary and recommendations for further consideration towards the goals of improving gear identification in entanglements and reducing the risk of entanglement. NMFS Report 3 also included a recommendation to expand the scoping of gear marking for bottom longline (longline) gear which coincides with a conservation recommendation from a final [Concurrence Letter](#) regarding the continued operation of the groundfish fishery and the effects of the fishery on Southern Resident killer whales. Based on NMFS recommendations in NMFS Report 3, the Council expanded the scoping of gear marking to include all longline and pot gear fisheries managed under the Groundfish FMP, which includes the LEFG fishery, then scheduled further consideration of the gear marking for June 2023. Table 9 provides the potential number of vessels in each fishery that may be affected by this recommendation.

Table 9. Potential range of number of vessels in each fishery that may be impacted by a longline and pot gear marking requirement.

<b>Fishery</b>	<b>Range of Vessels (n)</b>
Open Access*	Vessels that used longline: 107-148 Vessels that used pot: 66-98 Vessels that used both longline and pot in a single year:12-26
Limited Entry Fixed Gear	113-138 (Longline or Pot)
IFQ- Gear Switching	9-16

\*Range of the total number of OA vessels using any OA gear is 573-681.

A general description of fixed gear used in the fixed gear fisheries off California, Oregon, and Washington can be found in NOAA’s [Fixed Gear Guide](#) for commercial fisheries. It provides schematics of common gear configurations for traps/pots/longlines used in West Coast fisheries regarding types of buoys and floats, typical materials used (e.g., line, mesh, and wire), and general dimensions of gear.

Current gear marking for Federal West Coast longline and pot fisheries under the groundfish FMP can be found at 50 CFR [660.219](#) (for LEFG) and [660.319](#) (for OA fixed gear) and are summarized here. In addition, the definition of trap (pot) is provided in section 600.10 that cites “one or more lines attached to surface floats” can be used.



§660.219 Fixed gear identification and marking

(a) *Gear identification.*

- (1) Limited entry fixed gear (longline, trap or pot) must be marked at the surface and at each terminal end, with a pole, flag, light, radar reflector, and a buoy.
- (2) A buoy used to mark fixed gear must be marked with a number clearly identifying the owner or operator of the vessel. The number may be either:
  - (i) If required by applicable state law, the vessel's number, the commercial fishing license number, or buoy brand number; or
  - (ii) The vessel documentation number issued by the USCG, or, for an undocumented vessel, the vessel registration number issued by the state.

§660.319 Open access fishery gear identification and marking.

(a) *Gear identification.*

- (1) Open access fixed gear (longline, trap or pot, set net and stationary hook-and-line gear, including commercial vertical hook-and-line gear) must be marked at the surface and at each terminal end, with a pole, flag, light, radar reflector, and a buoy.
- (2) Open access commercial vertical hook-and-line gear that is closely tended as defined at [§ 660.311 of this subpart](#), may be marked only with a single buoy of sufficient size to float the gear.
- (3) A buoy used to mark fixed gear under [paragraph \(a\)\(1\)](#) or [\(a\)\(2\)](#) of this section must be marked with a number clearly identifying the owner or operator of the vessel. The number may be either:
  - (i) If required by applicable state law, the vessel's number, the commercial fishing license number, or buoy brand number; or
  - (ii) The vessel documentation number issued by the USCG, or, for an undocumented vessel, the vessel registration number issued by the state.

[§50 CFR 600.10](#) “Trap” (pot) means a portable, enclosed device with one or more gates or entrances and one or more lines attached to surface floats. Also called a pot.

Gear marking efforts that provide more information about fishery impacts and potentially reduce entanglements with large whales, in particular humpback and blue whales, are underway or have been implemented in some state-managed fisheries along the West Coast. The largest of these efforts was developed for the Dungeness crab fishery off [California](#), [Oregon](#), and [Washington](#). This effort was developed over time and included many stakeholders and managers to identify cross cutting issues, ensure continuity, and discuss trade-offs to develop a marking system that can be effectively used by managers but minimize economic impacts. These gear marking efforts include specific buoy tags and the potential for colored or bi-colored line marking that is specific to a state.

State-specific conservation plans that are being developed to address entanglement reductions and responses to them may provide insight to the Council as well.

If the Council continues to scope this action, it is important to utilize the experience of the states and stakeholders, examine the cost/benefit analyses that assisted in the decision making, and track finalization of the gear marking requirements and conservation plans. In addition, the Council and the industry will need to ensure that unique markings are developed for pot and longline gears under the groundfish FMP so that the correct fishery is properly assigned to any entanglements observed.

Since the Council expanded the scoping of gear marking for all pot and longline fisheries under the groundfish FMP, it may be prudent and efficient to develop a package for all gears so that a wide range of stakeholders are included at the same time rather than for just LEFG fishery. However, it could be argued that focusing on the development of gear marking requirements for just LEFG fishery (aligning it with the other management measures described above) could provide insight to the Council and stakeholders in other fisheries regarding the applicability/cost to other fisheries that use similar gear (i.e., OA and IFQ Gear Switching) or for those vessels that operate in both fisheries (e.g., LEFG and OA).

#### Workload

This item would require a regulatory amendment of the current gear marking requirements and potentially multiple advisory body and Council meetings. The Council and its advisory bodies may want to consider how to capitalize on past marking efforts and decide which fisheries are a high priority for continued scoping to provide NMFS the necessary information to meet the requirements of the BiOp. The Council will need to develop a purpose and need statement and a range of feasible cost-effective marking options. This work would likely include further refinement of current findings of NMFS Report 3 and additional engagement with fishery participants from the appropriate fishery sectors, per Council guidance. This may include additional workshop(s) to engage stakeholders and eventually the development of a range of alternatives. We assume that an impact assessment (environmental assessment or environmental impact statement) will be needed along with early engagement with NMFS staff to consider current BiOp terms and conditions and reinitiation triggers, including the effect of current litigation processes regarding humpback whale entanglements.

#### Questions for Council Consideration

1. What is the most efficient method to develop gear marking requirements for the LEFG fleet?
  - a. Option 1: Move forward with only scoping LEFG marking requirements.
  - b. Option 2: Move forward with scoping LEFG marking requirements along with all other sectors that use pot and longline fisheries under the groundfish FMP (IFQ gear switchers and open access).
  - c. Option 3: Move forward with scoping LEFG with one or two additional sectors.
2. Should the Council combine this effort with other efforts (e.g., slinky pot authorization) so that conservation benefits and impacts are considered collectively in light of the current BiOp?

## Potential Pathways

Given the complexities associated with some of the items listed above, Council staff, in consultation with NMFS staff, has developed two options for the Council to consider regarding the proposed actions.

### **Option 1- Move forward the entire package for consideration in September for ROA**

Under this option, the Council would choose to move forward with all prioritized items from this action. This may include all the actions described above, only some of the actions, or could include new items if other ideas are presented. For any items included, the Council and its advisory bodies should ensure that the description of the items is correct (e.g., are the sectors affected correctly identified).

Under Option 1, Council staff would develop an analytical document for the September Council meeting that describes the items in further detail to develop a purpose and need and a ROA. Additionally, if the Council or its advisory bodies have ideas on potential alternatives for the management measure concepts, they could include that guidance at this meeting for incorporation at September. In addition, confirming or defining the problem now for these actions and examining the need for them is necessary to assist staff in developing a purpose and need statement and a range of alternatives.

### **Option 2- Split into two packages**

Given the potential workload of Option 1, the Council may want to prioritize items that relate to whale/protected species interactions and subsequently follow up with changes to the LEFG primary tier program. Under Option 2, the Council would prioritize Package A, which would include the gear marking item and potentially the allowance for slinky pots. Package B, which includes the remaining items focused on aspects of the LEFG tier program, would come at a later date (to be determined). While this would delay the implementation of certain industry requests, it would ensure that Package A elements were kept on the most expeditious track for implementation.

#### Package A: Fixed Gear Package

- Gear marking
  - o LEFG only or select fishery sectors,
  - o Could include other risk reduction measures for further scoping/efficacy (i.e., allowance of single buoy line)
- Slinky pot allowance measure

#### Package B: Primary Tier Follow On Package

- Implementation of Cost Recovery program
- Removal of base permit
- Allowance of 4<sup>th</sup> stacked permit
- Allowance of non-sablefish cumulative limits measure
- Requirement of permit price reporting

In terms of process, Council staff would develop a preliminary analysis that includes a draft purpose and need statement with a range of alternatives for either Package A or B or some other combination of items per the Council's direction. Staff recommend the Council, or its advisory bodies provide guidance and ideas on potential alternatives for each management measure during the June Council meeting. This would assist staff in the development of a purpose and need a statement, range of alternatives and a preliminary analysis for the next scheduled Council meeting which is set for September 2023.