

GROUND FISH MANAGEMENT TEAM REPORT ON THE UPDATE ON 2023-2024  
HARVEST SPECIFICATIONS AND MANAGEMENT MEASURES

Since the November 2021 Pacific Fishery Management Council (Council) meeting, the Groundfish Management Team (GMT) has been working on the analysis of the 2023-24 biennial harvest specifications and management measures. At that meeting, the Council requested the GMT bring back information on several items for March, which this report addresses. Additionally, this report contains several items that over the course of our analysis, the GMT determined we need some additional guidance and/or clarification from the Council on.

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## Summary of Council Guidance Needed

1. Are the midwater rockfish EFPs still necessary?
2. Does the Council wish to pursue set-asides for quillback rockfish or copper rockfish off California? If so, for the set-asides south of 40° 10' N lat., should the set-asides be applied to all of the area south of 40° 10' N lat or for 2 sub-areas, 40° 10'-34 27' N lat and south of 34° 27' N lat.?
3. Does the Council wish to pursue ACTs for quillback rockfish or copper rockfish off California? If so, for the ACTs south of 40° 10' N lat., should the ACTs be applied to all of the area south of 40° 10' N lat or for 2 sub-areas, 40° 10'-34° 27' N lat and south of 34° 27' N lat.?
4. Does the Council wish to add to the management measures package an option to remove the 50-mt ACT for cowcod south of 40° 10' N. lat.?
5. Does the Council want to continue using yelloweye rockfish ACTs for the non-trawl sectors?
6. Does the Council wish the GMT to analyze the use of BRAs and/or BACs for uses not currently available/analyzed, making them potentially available for inseason Pacific spiny dogfish trawl bycatch minimization in the 2023-24 biennium?
7. Does the Council want to amend the Groundfish FMP to align the definition and uses of BACs with those in federal regulations as part of the 2023-24 harvest specifications process or pursue another pathway?
8. Should other bottom contact hook and line gears (e.g., vertical hook and line gear anchored to the bottom) still be permitted between 30 and 40 fathoms from 40° 10' N. lat. to 46° 16' N. lat., or would it be aligned with the rest of the Non-trawl RCA proposal (i.e., item 12e)?

## Exempted Fishing Permits

Depending on the Council's action in April on the non-trawl rockfish conservation area (RCA) agenda item and the selection of gear types (discussed more below), a discussion on the need or usefulness of continuing a couple of the non-trawl exempted fishing permits (EFPs) is necessary. The GMT anticipates Council discussion on this at the April meeting, but wanted to flag it now. If select EFPs are no longer warranted, the set-asides for those EFPs would then be "returned" to the fishery harvest guideline and distributed proportionally out to the sectors.

In discussions with the Groundfish Advisory Subpanel (GAP) about the non-trawl EFPs continuation, it was mentioned that there may be some interest in continuation of the EFPs but adding the use of natural bait. If EFP applicants are interested in adjusting their EFPs to include that component, it would be helpful for that to be signaled at the April meeting, so that the GMT would have some time to review in time for the June Council meeting where final action on EFPs and all of the biennial harvest specifications and management measures are scheduled to be finalized. This would be especially helpful in looking at the set-asides needed and the impact on downstream allocations. It is anticipated that the amount of set-asides would need to be increased as the purpose of using natural bait is to increase catch.

## Set-Asides

### *Quillback and Copper Rockfishes off California*

The GMT and Council staff have developed a potential method to estimate set-asides for quillback rockfish and copper rockfish in the research, EFP, and incidental open access (IOA) fisheries off

of California based on their preliminary annual catch limit (ACL) contributions to their complexes. These species are part of the Nearshore Rockfish Complexes north and south of 40° 10' N. lat. and have never had species-specific set-asides.

For quillback rockfish, under No Action, the proposed method estimates set-asides for the area 42° to 40° 10' N. lat. (northern California) and south of 40° 10' N. lat., whereas under Alternative 1, quillback rockfish set-asides would be estimated for California as a singularly managed stock. Though the results are preliminary, the estimated set-asides for both areas (northern California and south of 40° 10' N. lat.) under both No Action and Alternative 1 are all under 0.1 mt, with many under 0.01 mt. For reference, non-groundfish fishery mortality of quillback rockfish is highest in the directed Pacific halibut fishery north of 40° 10' N. lat., and in the research fishery south of 40° 10' N. lat.

For copper rockfish, Under No Action, the proposed method estimates set-asides for the area 42° to 40° 10' N. lat. (northern California) and south of 40° 10' N. lat.; however, copper rockfish south of 40° 10' N. lat. is split into 40° 10' N. lat. to 34° 27' N. lat. and south of 34° 27' N. lat. The Council indicated in November that these sub-areas could be combined; and therefore, the analysis provides estimated set-asides either for the area south of 40° 10' N. lat. or for two sub-areas: 40° 10'-34° 27' N. lat. and south of 34° 27' N. lat. The GMT seeks guidance on which area stratification the set-asides should apply to. Potential set-asides vary by sub-region, but set-asides generally increase from North to South. Non-groundfish fishery mortality of copper rockfish is highest in the directed Pacific halibut fishery north of 40° 10' N. lat. in the IOA fishery south of 40° 10' N. lat.

## **Annual Catch Targets**

### *Quillback and Copper Rockfishes off California*

As per the motions from the November 2021 meeting, the GMT and Council staff have developed a potential method for determining an annual catch target (ACT) for quillback rockfish and copper rockfish off of California. These species are managed under the Nearshore Rockfish Complex north and south of 40° 10' N. lat. and have never been subject to species-specific ACTs. The same areas and subareas as described above in the set-aside section for quillback rockfish and copper rockfish apply to ACTs.

The method uses proportions to estimate each sector's (commercial and recreational) mortality based on preliminary ACL contributions to the stock complex, and then examines potential ACTs of 25 percent, 50 percent, and 75 percent of that amount. Both species are primarily caught in the recreational off of California.

### *Cowcod*

For the 2021-22 cycle, the Council utilized a 50 mt ACT, below the Fishery Harvest Guideline (HG), as a precautionary measure to manage the newly rebuilt stock. Through overwinter analysis and discussions with Council staff, the GMT foresees potential increases in cowcod mortality should the Council proceed with Action Item 12.e and more non-trawl fishing effort shifts toward the shelf and slope. Some additional flexibility for the non-trawl sector may need to be considered by way of removing the ACT (Table 1). The GMT will be providing a report with additional details in the April advanced briefing book.

**Table 1. Trawl and non-trawl sector allocations for 2023 and 2024 based on keeping and removing the 50 mt ACT. All values are in mt.**

Sector	2023-24 with 50 mt ACT	2023 No ACT (mt)	2024 No ACT (mt)
Trawl	18	24.8	24.4
Non-trawl	32	44	43.4

### *Yelloweye Rockfish*

In the last two cycles, the Council has taken a precautionary approach and adopted yelloweye rockfish ACTs for the non-trawl sectors. Table 2 shows the preliminary non-trawl sector-specific allocations based on the fishery HG and the ACT. The GMT requests clarification if the Council intends to continue to use ACTs for the non-trawl sectors for 2023-24 for yelloweye rockfish. As a reminder, for the 2021-22 biennium, the Council opted to combine the non-nearshore and nearshore HGs and ACTs for yelloweye rockfish to create a set of non-trawl commercial HGs and ACTs.

**Table 2. The preliminary non-trawl sector specific allocations (in mt) based on using the fishery harvest guideline and ACTs for 2023 and 2024, applying the status quo sharing percentages.**

Year	2023 (mt)		2024 (mt)	
ACL	66		66	
Fishery HG	55.4		55.4	
IFQ (8%)	4.4		4.4	
Non-trawl (92%)	<b>HG</b>	<b>ACT</b>	<b>HG</b>	<b>ACT</b>
	<b>50.9</b>	<b>39.9</b>	<b>50.9</b>	<b>39.9</b>
Commercial (20.9%)	10.6	8.4	10.6	8.4
WA Rec. (25.6%)	13.2	10.4	13.2	10.4
OR Rec. (23.3%)	11.7	9.2	11.7	9.2
CA Rec. (30.2%)	15.3	12.0	15.3	12.0

### **Canary Rockfish Mortality in Non-Trawl Sectors**

During the January GMT meeting, team members from the Washington Department of Fish and Wildlife (WDFW) informed the team of unexpectedly high catches of canary rockfish in 2021 from the Washington recreational fishery. This high catch prompted WDFW to request that the GMT provide information on recent mortality from the non-trawl sectors ([Agenda Item E.9.a, Supplemental WDFW Report 1, March 2021](#)). Table 3 shows the most recent five years of mortality data from the Groundfish Expanded Mortality Multi-year (GEMM) product, except the 2021 values that are preliminary mortality estimates from RecFIN and PacFIN.

**Table 3. Total mortality (mt) from non-trawl sectors for the most recent five years, with the five-year average mortality, and the preliminary 2023 sector share of canary rockfish. All values in mt.**

Sector	2017	2018	2019	2020	2021 *	5-Year Avg.	2022 Share (mt)	Preliminary 2023 Share (mt)
WA Rec	5.0	4.5	13.6	8.5	39.4	14.2	42.3	40.9
OR Rec	28.2	43.6	38.7	60.5	38.5	41.9	63.6	61.5
CA Rec	83.4	61.8	71.4	46.3	70.7	66.7	114.2	110.5
Nearshore	8.1	8.3	10.5	12.8	14.7	10.9	84.6	81.8
Non-Nearshore	4.6	3.4	4.1	11.4	16.1	7.9	39.2	40.9
<b>Total</b>	<b>129.4</b>	<b>121.7</b>	<b>138.3</b>	<b>139.6</b>	<b>148.6</b>	<b>135.5</b>	<b>343.9</b>	<b>335.6</b>
* Preliminary estimates								

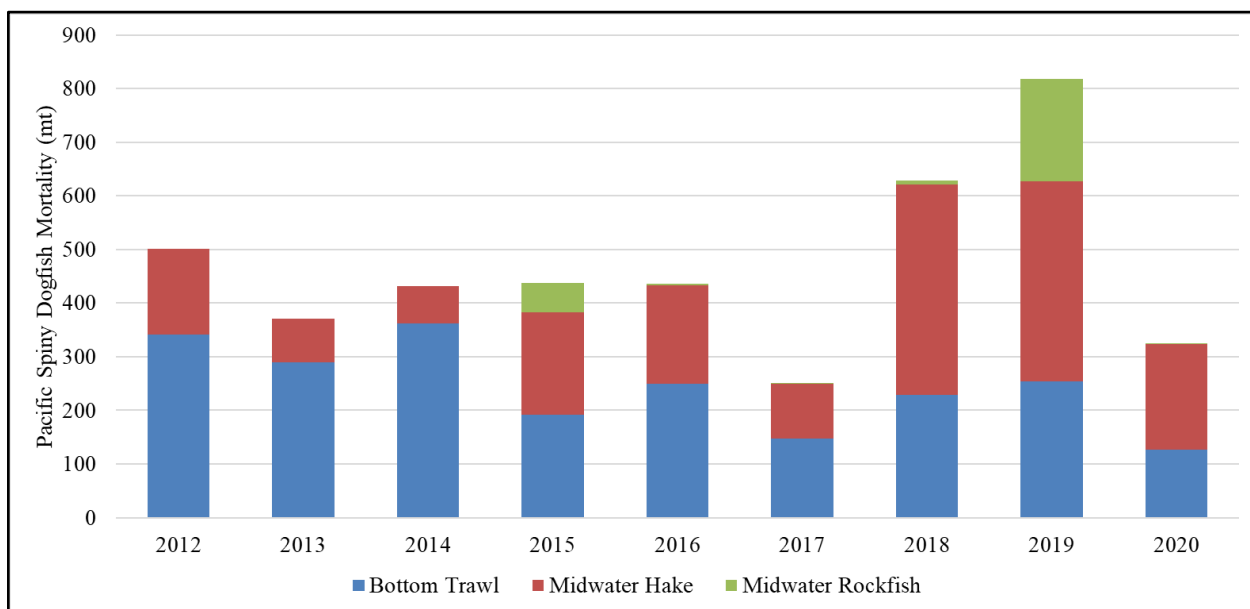
### **Pacific Spiny Dogfish Spatial Management Tools**

The 2021 stock assessment of Pacific spiny dogfish estimated the fraction unfished in 2021 at 42 percent, just above the 40 percent management target. The 2023 and 2024 ACLs under No Action are projected to be the lowest they have been since 2013. Based on recent mortality trends, particularly in the groundfish trawl fishery, these lower ACLs could be at risk of being exceeded. Given that there are no allocations or set-asides for Pacific spiny dogfish, that no fishery currently targets Pacific spiny dogfish, and that the stock is primarily caught as bycatch, the Council requested in November 2021 that the GMT, “evaluate potential management measures to control catch of spiny dogfish in groundfish fisheries if the ACL is exceeded or projected to be exceeded, including but not limited to the use of Block Area Closures (BACs) and Bycatch Reduction Areas (BRAs),” ([November 2021 Draft Motion in Writing](#)).

Roughly 75-90 percent of total Pacific spiny dogfish mortality is attributed to the groundfish trawl fishery each year, which is made up of the at-sea Pacific whiting sectors (Mothership and Catcher-Processor) and the shorebased individual fishing quota (IFQ) sector. Roughly 20-40 percent of total Pacific spiny dogfish mortality is attributed to the at-sea sectors and roughly 30-60 percent to the shorebased IFQ sector. Data from the West Coast Groundfish Observer Program (WCGOP) and from the At-Sea Hake Observer Program demonstrate higher Pacific spiny dogfish bycatch rates in the late fall months, particularly October and November, as well as in more northerly latitudes (i.e., off Washington) for both the at-sea and shorebased IFQ sectors. For example, WCGOP data (not including EM trips) indicates that the average latitude of IFQ hauls with Pacific spiny dogfish catch greater than 5 mt is 47° N. lat. The average of hauls with 1-5 mt of Pacific spiny dogfish was 46° N. lat., and 45° N. lat. for hauls with less than 1 mt.

To determine a risk to the Pacific spiny dogfish ACL inseason and whether a spatial management tool should be used to mitigate bycatch, the Council would need robust inseason catch data. Complete inseason tracking of Pacific spiny dogfish in the at-sea sectors is feasible, because the fleet records catch, including discards, through Sea State. In the shorebased IFQ sector, however, Pacific spiny dogfish is not managed as a quota species, and therefore, discards are not recorded by video reviewers for vessels carrying Electronic Monitoring (EM) equipment. WCGOP observers do record Pacific spiny dogfish discards; however, in-season estimates are not available

because they are not managed as an IFQ species. Annual IFQ mortality estimates for EM trips are derived from the ~20 percent of EM trips that carry a scientific WCGOP observer. However, nearly 100 percent of Pacific spiny dogfish caught by shoreside Pacific whiting vessels using midwater trawl gear are landed due to maximized retention. As shown in Figure 1 below, shoreside Pacific whiting catch (shown in Figure 1 as “Midwater Hake”) can sometimes make up the majority of IFQ mortality, particularly during years in which bycatch is high for the entire groundfish trawl fishery (e.g., 2018). Roughly 95 percent of bottom trawl catch is discarded, and sufficient estimates are not available until the following year via WCGOP’s Groundfish Mortality Report. This means that the GMT and Council could potentially look at at-sea total catch data alongside shoreside Pacific whiting landings to determine if there may be a risk of exceeding the ACL.



**Figure 1. Pacific spiny dogfish mortality (mt) in the shorebased IFQ sector by trawl gear type and by target stocks for midwater trawl gear (i.e., midwater hake vs. midwater rockfish). All gear types include their respective EM data. Non-trawl gear in the IFQ fishery was not included, as an average of 4 percent of Pacific spiny dogfish mortality is attributed to non-trawl IFQ gear yearly. Data Source = GEMM**

For purposes of spatially mitigating Pacific spiny dogfish bycatch, the Council’s options include:

- **Bycatch Reduction Areas (BRAs):** BRAs are applicable to vessels using midwater trawl gear coastwide and would prohibit fishing shoreward of the boundary lines approximating the 75-fathom, 100-fathom, 150-fathom, or 200-fathom depth contours. However, the analysis supporting the 75-fathom, 100-fathom, and 150-fathom depth contours is potentially outdated. ([50 CFR 660.130\(e\)\(6\)](#))
- **Block Area Closures (BACs):** BACs are bound by both latitude and depth, offering a more precise tool than BRAs for closing areas with high expected abundance. However, BACs have only been analyzed for the use of mitigating salmon bycatch by midwater trawl gear off all three West Coast states. For bottom trawl gear, BACs have been analyzed and are available for groundfish bycatch mitigation off Oregon and California. ([50 CFR 660.111](#))

- Rockfish Conservation Areas (RCA): The Council could modify the trawl RCA line, another depth-based closure, which is currently 100-150 fathoms off Washington for all trawl gear types. ([50 CFR 660.60\(c\)\(3\)\(i\)\(A\)](#))

Given that the median depth of Pacific spiny dogfish mortality by the at-sea sectors is roughly 250 fathoms, and that the only likely relevant depth contour that has been analyzed is the 200-fathom depth contour, a BRA shoreward of 200 fathoms is the only potentially useful tool available to the Council for mitigating bycatch in the at-sea sectors. However, closing the entire coast shoreward of 200 fathoms to midwater trawl gear would effectively shut down fishing activity for much of the at-sea fleet, which already uses move-along measures to avoid species of concern.

The GMT seeks guidance on whether the Council wishes the GMT to analyze the use of BRAs and/or BACs for uses not currently available/analyzed, making them potentially available for inseason Pacific spiny dogfish trawl bycatch mitigation in the 2023-24 biennium in the event that the ACL is exceeded or projected to be exceeded. Given the spatial and seasonal nature of Pacific spiny dogfish catch in the groundfish trawl fishery, the GMT considers BACs for midwater trawl gear to mitigate groundfish bycatch off all three (or certain) states to be the potentially most useful tool that is not currently in the Council's toolbox. Roughly 50-70 percent of total Pacific spiny dogfish mortality is attributed to midwater trawl gear (at-sea and shorebased IFQ), and a more spatially explicit closure through BACs would lead to fewer impacts to fishing activity than currently available BRAs. This analysis would be largely qualitative and would be conducted with the intent of providing results in the April and/or June briefing books. It is worth noting, however, that Pacific spiny dogfish bycatch by midwater trawl gear is expected to be lower in 2023 and 2024 than recent maximums (i.e., 2018 and 2019) given expected changes to the Pacific whiting fishery as a result of the Pacific Whiting Utilization action item. The Council took final action at this meeting (March 2022), and implementation of these changes is expected in January 2023.

## **Block Area Closures**

During the course of overwinter analysis the GMT discovered that the definition of BACs within the groundfish FMP and federal regulations are not aligned ([Agenda Item E.9, Attachment 1](#)). Specifically, the FMP does not currently clarify that BACs are available for bottom trawl gear off Oregon and California as well as for salmon bycatch mitigation by midwater trawl gear coastwide, as described in the salmon bycatch mitigation rulemaking ([86 FR 10857](#)). Attachment 1 offers some suggested revisions to the FMP to reflect this and notes that the Council could choose to make this correction as part of the current harvest specifications and management measures package. The GMT requests that the Council indicate whether this is the Council's preferred pathway or whether another process should be explored.

## **New Management Measures**

### *CDFW Recreational RCA*

This new mitigation measure, described in [Agenda Item E.9.a, Supplemental CDFW Report 1](#), is a novel utilization of the previously established Rockfish Conservation Area (RCA) boundary lines for the California recreational fishery. This new mitigation measure would allow fishing seaward of a specified RCA boundary line and prohibit fishing shoreward of that line. Depending upon which RCA boundary line (e.g., 30, 40, 50, 60, 75, 100, and 125 fathom lines) is used, fishing could be prohibited in state waters or state and federal waters. This new mitigation measure may

be used during the regular season setting process or as inseason action as needed to take steps to achieve harvest specifications, especially for rebuilding species like yelloweye rockfish, or species of concern such as quillback rockfish, copper rockfish, or cowcod.

### *CDFW Recreational Bag limits*

At the November 2021 Council meeting, the Council recommended, and NMFS subsequently implemented, a one fish sub-bag limit for quillback rockfish, a one fish sub-bag limit for copper rockfish, and a four fish sub-bag limit for vermilion rockfish off of California to reduce mortality in the 2022 recreational fishery. These species are part of CDFW's recreational fishery Rockfish Cabezon Greenling (RCG) category. The reductions to mortality associated with the inseason action to reduce the sub-bag limit within total RCG bag limit for these rockfish effective January 1, 2022, are not yet known.

Several bag limit options are analyzed as part of the 2023-24 specifications if the Council decides further reductions to fishing pressure are needed. These range from modifying current sub-bag limits to prohibiting retention of some species within current aggregate daily bag limits. All of the bag limits described in this new management measure may be used during the regular season setting process or as inseason actions as needed to take steps to achieve harvest specifications. Quillback rockfish, copper rockfish, and vermilion rockfish sub-bag limits analyzed a range from ten to zero fish (i.e., no retention) within the 10-fish RCG bag limit.

### *Sablefish Season Extension*

The GMT investigated the current status of the season end-date for the primary 'tier' sablefish season and developed options to extend the season from October 31 to December 31, including options for the final date to retain incidental Pacific halibut by the fishery. The GMT analyzed potential gear and participation impacts resulting from a December 31 season end date, as well as economic impacts and impacts to other groundfish species and protected resources.

### *Shortbelly Rockfish Amendment*

Per instructions from the Council, the GMT and Council staff developed FMP amendment language specifying a catch threshold for shortbelly rockfish that would trigger Council review. The threshold was specified at 2,000 mt and if exceeded, or projected to be exceeded, the Council would be required to examine available fishery data and determine if additional conservation measures should be implemented to reduce, if not curtail, shortbelly rockfish catch in the groundfish fishery.

### *Non-Trawl Rockfish Conservation Modifications*

This management measure would allow for non-bottom contact gear to be used within the non-trawl rockfish conservation area (NT\_RCA). One issue that has become apparent in the over-the-winter analyses is the large amount of uncertainty, specifically related to the specific gear configurations that would be permitted based on the Council action. The GMT notes that [Agenda Item E.9.a, Supplemental NMFS Report 1](#) provides a narrowing of gear and sector definitions to the NT\_RCA 12e new management measure. The GMT agrees with the narrowing to allow the gears tested in the Emley-Platt and Real Good Fish EFPs exclusively at this time. The GMT also recognizes that the NMFS proposed revision of Action Item 12e prohibits the use of natural bait and weighted hooks, so as to stay within the previously analyzed 2017 Seabird Biological Opinion. The Council may indicate now, or request in April, whether the GMT should analyze the NT\_RCA



action using NMFS' proposed clarifications. The GMT also recognizes that changes to limited entry fixed gear (LEFG) crossover provision requirements, and other gear types are being discussed and analyzed through the Non-trawl RCA agenda item that is going through the Council process outside of the 2023-24 biennial harvest specifications process.

If the Council moves forward with Action Item Checklist Item 12e, the GMT would like to request clarification on the area between 30-40 fathoms north of 40° 10' - 46° 16' N. lat. which currently allows all hook and line gear types except for longline and dinglebar while 12e would only permit non bottom contact gear types (i.e., would also exclude vertical hook and line gear anchored to the bottom). Does the Council intend to align this area with the rest of this action item, and redefine allowed gear in this area to be what is found in Supplemental NMFS Report 1?

03/11/22