

GROUND FISH MANAGEMENT TEAM REPORT ON STOCK DEFINITIONS

The Groundfish Management Team (GMT) reviewed the materials in the briefing book and received an overview from Mr. John DeVore of Pacific Fishery Management Council (Council) staff during our October 20, 2022 webinar and had some lengthy discussions about this topic. Below are some additional considerations.

Range of Alternatives

[Agenda Item H.5. Attachment 1](#) provides a draft Range of Alternatives (ROA) for consideration at this meeting, as well as some background on how the alternatives were developed. The Council may choose to use this ROA, or revise as deemed necessary.

No Action

It is the GMT's understanding that the No Action alternative is not a viable alternative, as it does not meet the purpose and need, and would not allow the National Marine Fisheries Service (NMFS) to make status determinations. Therefore, while No Action is needed for the analysis of the range, it should not be considered as an alternative going forward.

Action Alternatives

For any species for which Alternative 1 is chosen, the GMT recommends defining that species as an “interrelated single stock” instead of “coastwide” to avoid implying that the species’ range is coastwide (e.g., squarespot rockfish, California scorpionfish). For the purposes of stock status determination, the Groundfish Fishery Management Plan (FMP) only needs to indicate whether a species is managed off the U.S. West Coast as a single stock or as multiple stocks with separate Overfishing Limits (OFLs). The GMT believes that the term “interrelated single stock” would provide management flexibility in the future in light of potential climate change impacts on species’ ranges.

The GMT recommends adopting the ROA proposed in [Agenda Item H.5, Attachment 1, November 2022](#) with our recommended revisions in Table 1 below. With those revisions, we believe the ROA would adequately meet the Purpose and Need for the priority species being considered for Amendment 31.

Table 1. Table 1 from Attachment 1, with GMT recommended revisions (cells with text and shaded darker). Lightly shaded cells with * are included in the Attachment 1 ROA; blank/unshaded cells are Alternatives not included at this time for these species.

Species	Alt. 1 Interrelated Single Stock	Alt. 2 State-Specific	Alt. 3 North and South of 40° 10' N. Lat.
Black rockfish	REMOVE	*	
Canary rockfish	*		
Copper rockfish	*	*	
Dover sole	*		
Lingcod			*
Pacific spiny dogfish	*		
Petrale sole	*		
Quillback rockfish	*	*	
Rex sole	*		
Sablefish	*		
Shortspine thornyhead	*		
Squarespot rockfish	ADD	REMOVE	
Vermilion/sunset rockfishes	REMOVE ^{a/}	*	REMOVE

a/ Remove if the SSC recommended delineation at Point Conception is added to the ROA (see “Vermilion/sunset rockfishes” below).

Justification for GMT Recommended Changes

Black rockfish

Given the history of management as multiple stocks, **the GMT recommends removing Alternative 1 from the ROA for black rockfish.** Black rockfish has been managed as multiple stocks (i.e., state-specific), each with specific OFLs, since at least 2003 and has been managed in a complex with blue and deacon rockfishes off Oregon since 2019. In the 2015 stock assessment, black rockfish were assessed at a state-specific level and, at this time, the GMT is not aware of genetic information that would support an interrelated single stock off the West Coast (see Table 1 in [Agenda Item H.5, Attachment 1, November 2022](#)). This recommendation is distinctly different from what the team is recommending in the ROA for copper rockfish and quillback rockfish, because black rockfish has extensive species-specific management and area-specific management history. It is unlikely that continuation of that approach will appreciably change harvest and management efficiency compared to recent years.

Squarespot rockfish

The GMT recommends adding Alternative 1 and removing Alternative 2 (CA only) for squarespot rockfish. Based on current knowledge, there is little evidence of multiple distinct populations despite the fact that information for the 2021 assessment was only available off California. If the range of squarespot rockfish expands northward across the California/Oregon border in the future, it can still be considered an interrelated single stock across geopolitical state boundaries, given the best scientific information available (BSIA).

Vermilion/sunset rockfishes

The GMT recommends removing Alternative 3 (north and south of 40° 10' N. lat.) for vermilion/sunset rockfishes, because the structure of the most recent stock assessment does not inform stock status or OFLs stratified at this latitude, and therefore, this alternative may not meet the purpose and need for Amendment 31. The GMT notes the Scientific and Statistical Committee's (SSC's) proposal to include a fourth alternative for vermilion/sunset rockfishes to have a stock delineation at 34° 27' N. lat. (Point Conception; [Agenda Item H.5.a, Supplemental SSC Report 1, November 2022](#)), and the GMT supports including this alternative in the ROA. The GMT believes that the SSC recommended alternative to have vermilion/sunset rockfishes defined with a break at Point Conception would essentially eliminate Alternative 1 (interrelated single stock) from further consideration. **Therefore, if the SSC recommended alternative is added to the ROA, the GMT recommends removing both Alternatives 1 and 3 from further consideration.**

Additional Species to be Considered for Amendment 31

At the September 2022 Council meeting the GMT provided a list of additional species to be included in Amendment 31 as interrelated single stocks because they have previously been assessed as a single coastwide stock or are unassessed and managed as such (Table 2; [Agenda Item G.5.a Supplemental GMT Report 1 September 2022](#)). **The GMT recommends that the species in Table 2 below be added to Amendment 31 with species-specific ROAs that only include Alternative 1**, because it would support a larger number of species having stock definitions formalized in the FMP. Furthermore, defining these stocks as interrelated single stocks in the FMP would align with current management, and the analytical workload to do so is expected to be minimal. In the course of analyzing the alternatives, should any new information warrant consideration of an alternative other than an interrelated single stock, considering those species as part of subsequent amendments (e.g., Phase 2) would avoid Amendment 31 delays. **The GMT recommends, at a minimum, adding yelloweye rockfish in Amendment 31 with an ROA that only includes Alternative 1**, as the GMT believes it would be prudent to define rebuilding stocks in the FMP with this amendment as opposed to waiting until a later phase.

Table 2. Other species the GMT recommends be included in Amendment 31 with an ROA that includes Alternative 1, as they are assessed as an interrelated single stock (previously “coastwide”) or are unassessed and currently managed as an interrelated single stock or stock complex.

Species (Complex)	Alt. 1 Interrelated Single Stock	Alt. 2 State-Specific	Alt. 3 North and South of 40° 10' N. Lat.
Arrowtooth flounder	*		
Big skate	*		
California scorpionfish	*		
Darkblotched rockfish	*		
English sole	*		
Longnose skate	*		
Longspine thornyhead	*		
Widow rockfish	*		
Pacific cod	*		
Splitnose rockfish	*		
Starry flounder	*		
Leopard shark (Other Fish)	*		
Butter sole (Other Flatfish)	*		
Curlfin sole (Other Flatfish)	*		
Flathead sole (Other Flatfish)	*		
Pacific sanddab (Other Flatfish)	*		
Rock sole (Other Flatfish)	*		
Sand sole (Other Flatfish)	*		
YELLOWEYE ROCKFISH	*		

GMT Requested Clarifications and Corrections

[Agenda Item H.5, Attachment 1, November 2022](#) incorrectly states that the 2021 stock assessment estimated that 0.27 percent of the squarespot rockfish population is north of 40° 10' N. lat. The GMT would like to provide clarification on this statement. The 2021 stock assessment of squarespot rockfish did not provide area-based biomass estimates north and south of 40° 10' N. lat. However, the stock assessment did provide the percentage of total removals that occurred north of 40° 10' N. lat. since 1981, which was 0.27 percent of total coastwide removals (noting that removals have only been recorded in California waters).

Finally, Table 1 in [Agenda Item H.5 Attachment 1, November 2022](#), there are statements provided under the types of scientific information available to consider by species that lack proper citation. For proper consideration during any over-winter analysis, these sources should be provided.

GMT Workload/Capacity

The GMT will be conducting two work sessions between the November 2022 and March 2023 Council meetings (November 28 online and a week in January, timing and location TBD) to work

on the analysis to bring to the Council at the March 2023 Council meeting. The GMT requests the Council be specific about what the GMT will be expected to produce for the March 2023 meeting.

The GMT further notes that the timeline of the next phase is likely to align directly with the 2025-26 harvest specifications and management measures process, which will curtail the involvement from the GMT. Further, the concurrent timelines may preclude the Council from taking up any new management measures during the harvest specifications and management measures process.

Summary of GMT Recommendations

The GMT recommends:

- 1. For any species for which Alternative 1 is chosen in final action, the GMT recommends defining that species as an “interrelated single stock” instead of “coastwide” to avoid implying that the species’ range is coastwide.**
- 2. Adopt the ROA proposed in [Agenda Item H.5, Attachment 1, November 2022](#) with our recommended revisions (also shown in Table 1):**
 - a. Remove Alternative 1 from the ROA for black rockfish.**
 - b. Add Alternative 1 and remove Alternative 2 for squarespot rockfish.**
 - c. Remove Alternative 3 for vermilion/sunset rockfishes, or, if the SSC recommended alternative is added to the ROA, remove both Alternatives 1 and 3 from further consideration for vermilion/sunset rockfishes.**
- 3. Add species in Table 2 to Amendment 31 with species-specific ROAs that only include Alternative 1, or, at a minimum, add yelloweye rockfish with an ROA that only includes Alternative 1.**

PFMC
11/04/22