

GROUND FISH MANAGEMENT TEAM REPORT ON FINAL STOCK ASSESSMENT PLANS AND TERMS OF REFERENCE

The Groundfish Management Team (GMT) reviewed the documents in the advanced briefing book and received an overview from Dr. Jim Hastie and Dr. Chantel Wetzel of the National Marine Fisheries Service (NMFS) Northwest Fisheries Science Center (NWFSC) and John DeVore of the Pacific Fishery Management Council (Council).

Final Recommendations of Species to be Assessed in 2023

The GMT recommended stock assessments for 2023 (Table 1) have been modified from those provided in March (Table 1; [Agenda Item E.8.a, GMT Supplemental Report 1, March 2022](#)) based on feedback from the Council ([March 2022 Decision Document](#)), the Science Centers, and other advisory bodies. The GMT's recommendations on species to assess and level of assessment are informed by the challenge potentially posed by each species (e.g., number of assessment areas), the quality and quantity of data available, and the capacity of age readers and the Science Centers.

The GMT recommends four species for full assessment in 2023: black rockfish, copper rockfish off California, petrale sole, and canary rockfish. It is anticipated that both black rockfish and copper rockfish will require multiple area assessments and will not only require multiple assessors but also a species-specific Stock Assessment Review (STAR) panel. A full assessment for petrale sole would allow for the inclusion of new research on fecundity and linkages between environmental drivers and recruitment strength. Canary rockfish was not included in the GMT recommendations provided in March but was added during this meeting in lieu of roughey/blackspotted rockfish after considering ageing capacity and time since the last assessment. Roughey/blackspotted rockfish are difficult to age, and given that there were only limited ages used in the 2013 assessment, postponing this assessment until 2025 would provide additional time to read otoliths to support the next full assessment. In comparison, the workload for ageing canary rockfish would be lower given the considerable ageing efforts that were conducted to support the 2015 assessment. Finally, the previous assessment for canary rockfish was conducted in 2015. If this species is not assessed in 2023 it would likely be conducted in 2025 given that it will be ten years since the last assessment (i.e., end of the available projections). These four species are expected to require three STAR panels for review in 2023.

The GMT notes that if black rockfish and copper rockfish are included in the final selection by the Council, the Council will need to provide guidance to the Stock Assessors Team by November 2022 regarding how they may want to define the stocks (geographically) for purposes of NMFS' status determinations. Potentially, action will need to be taken to amend the Groundfish Fishery Management Plan (FMP) to better align status determinations with the FMP and 2023 assessments. The GMT provides additional comments on this type of timeline and the connection to stock definitions in Agenda Item F.4.a, Supplemental GMT Report 1, June 2022.

The GMT recommends two species for a length-based data moderate assessment in 2023: shortspine thornyhead and rex sole. Both species were last assessed in 2013. The 2013 assessment of shortspine thornyhead used catch, indices of abundance from the NWFSC West

Coast Groundfish Bottom Trawl (WCGBT) survey, and length data since shortspine thornyhead otoliths are currently unable to be read reliably. The 2013 assessment for rex sole was an index-based data moderate assessment which used catch and index of abundance information from the NWFSC WCGBT survey. Conducting length-based data-moderate assessments for each of these species will provide needed management advice.

The GMT recommends three species for catch-only updates in 2023: cowcod, widow rockfish, and yelloweye rockfish. Conducting catch-only updates for each of these species can potentially provide additional flexibility in future harvest specifications.

Table 1. The GMT’s recommended species to be assessed in 2023, the NMFS rank for each species, and the potential assessment area.

Species	GMT recommendation	NMFS Rank ²	Assessment Area
Black rockfish ¹	Full Assessment	1	State or region specific
Copper rockfish ¹	Full Assessment	29	CA areas only
Petrable sole	Full Assessment	3	Coastwide
Canary rockfish	Full Assessment	13	Coastwide
Shortspine thornyhead	Data-Moderate	21	Coastwide
Rex Sole	Data-Moderate	23	Coastwide
Cowcod	Catch Only Update	65	South of 40° 10' N. Lat.
Widow rockfish	Catch Only Update	12	Coastwide
Yelloweye rockfish	Catch Only Update	10	Coastwide

¹The assessment will most likely have multiple assessment areas along the U.S. West Coast which will require the Council to take action prior to or by September 2023 to amend the FMP to define the management areas.

² [Agenda Item F.3, Supplemental REVISED Attachment 2, June 2022](#)

The GMT has compiled a preliminary list of species to be considered for assessment in 2025 (Table 2), while recognizing that this list is likely to change between now and 2024. Early identification of species that have a high likelihood of being considered for assessment in 2025 can allow states and the Science Centers to prioritize ageing and data collection appropriately. The list is based on top-ranked species in the 2022 assessment prioritization, time since the last assessment, and species that the Council or advisory bodies have identified as a priority for assessment but were not able to be included in the 2023 list. If any of the species recommended by the GMT for assessment in 2023 are not selected (Table 1), these should be added to the 2025 list provided below (Table 2). The GMT recognizes that the number of species identified for consideration in 2025 will likely outstrip assessment capacity in 2025, but we considered it important to provide a full list of species with assessment needs.

The GMT identifies eight species for assessment consideration in 2025: sablefish, rougheyeye/blackspotted rockfish, Pacific spiny dogfish, China rockfish, aurora rockfish, yelloweye rockfish, quillback rockfish, and yellowtail rockfish.

Table 2. The GMT’s recommended species to be assessed in 2025, the NMFS rank for each species, and the potential assessment area.

Species	GMT recommendation	NMFS Rank	Assessment Area
Sablefish	Full	5	Coastwide
Rougheye/Blackspotted rockfish	Full	27	Coastwide
Pacific spiny dogfish	Full	43	Coastwide
China rockfish	Full	25	State or region specific
Aurora rockfish	Full	63	Coastwide
Yelloweye rockfish	Full or Update	9	Coastwide
Quillback rockfish	Full	4	State or region specific
Yellowtail rockfish	Full or Full and Update³	10	State or region specific

³ Either full assessments for both areas north and south of 40° 10' N. lat. could be conducted or potentially an update north of 40° 10' N. lat. and a full assessment south of 40° 10' N. lat.

The GMT discussed whether to recommend sablefish for assessment in either 2023 or 2025 at both this and the March 2022 meeting. The GMT also discussed public comment received during this meeting requesting that sablefish be assessed in 2023. Sablefish is a highly valuable species off the West Coast and should be closely monitored. However, given the large number of species within the FMP with assessment needs, this requires careful consideration when allocating assessment resources across all species. Given that sablefish was last fully assessed in 2019 with an update assessment conducted in 2021, combined with the positive trend in the index of abundance from the NWFSC WCGBT survey ([Agenda Item F.3, Attachment 4, June 2022](#), page 289) in recent years, the GMT recommends waiting until 2025 to assess sablefish again in order to meet the assessment needs of other species within the FMP.

Rougheye/blackspotted rockfish was last assessed in 2013 and was initially identified by the GMT during the March meeting as a species for assessment consideration in 2023 based on the time since the last assessment and that recent removals have been approaching the annual catch limit for this stock. However, based on feedback from Washington Department of Fish and Wildlife that the limited existing aged otoliths for the 2013 assessment leaving a large number of collected otoliths to be read, combined with the challenges in ageing rougheye/blackspotted rockfish, waiting to assess this stock until 2025 would provide the needed time to provide adequate age reads to support a future assessment.

The 2021 assessment of Pacific spiny dogfish had a high level of uncertainty around the proportion of the biomass observed by the NWFSC WCGBT survey during the summer months when sampling by the survey occurs. Additionally, the assessment estimated the stock to be minimally higher than the management target of 40 percent of unfished biomass with the stock projected to slowly decline over the projection period based on the default harvest level for elasmobranchs (i.e., spawning potential ratio of 0.45). The GMT recommends that Pacific spiny dogfish be considered for assessment in 2025 in order to continue closely monitoring this species and to allow for

additional time to investigate survey catchability and transboundary nature of the stock, as well as incorporate updated data.

China rockfish and aurora rockfish were both identified by the GMT for assessment consideration in 2025 given the time since the last assessment for each of these species. China rockfish was last assessed in 2015 and aurora rockfish was last assessed in 2013. This means that the 2025 and 2026 harvest specifications for aurora rockfish, as well as English sole, would need to be determined outside of the 2013 stock assessment projections. The GMT points out that this has been done for other species in the past when a new assessment was not conducted prior to the 10-year projections expiring. The GMT discussed how to prioritize such species, given the amount of species in the FMP, and concluded that species approaching their 10-year expiration with high attainment and the potential to constrain certain sectors should take priority over those that do not, along with other considerations such as data availability and assessor capacity.

Yelloweye rockfish was estimated to have a 50 percent probability of rebuilding to the management target by 2029. As yelloweye rockfish approaches rebuilt status, the GMT recommends that the timing for a full or update assessment should be carefully considered to optimize the probability of the assessment estimating the stock rebuilt.

Finally, quillback rockfish and yellowtail rockfish were both included in the GMT's preliminary species list for 2023. However, we recommend waiting until 2025 to assess both of these species, which would provide additional time for data collections that could inform each of these assessments.

Terms of Reference for Groundfish and Coastal Pelagic Stock Assessments

The GMT recommends that the draft Terms of Reference for Groundfish and Coastal Pelagic Stock Assessments be selected as final ([Agenda Item F.3, Attachment 6, June 2022](#)). As we discussed in March, the Scientific and Statistical Committee (SSC) captured the GMT's ideas on how to improve future stock assessment processes. The GMT agrees with the SSC that in the future, data-moderate assessments would benefit from a STAR panel review, or at least a review process that allows for sufficient review time and formal advisory participation.

PFMC
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