# GROUNDFISH MANAGEMENT TEAM REPORT ON FINAL STOCK ASSESSMENT PLAN AND TERMS OF REFERENCE

## Final Recommendations for Species to be Assessed in 2025

The Groundfish Management Team's (GMT) recommended list of species to assess in 2025, assessment type, and species to conduct catch-only projections are shown in Table 1 below.

Table 1. The GMT's recommended species to be assessed in 2025, the assessment type, and the anticipated assessment area. The species are ordered by assessment type.

Species	GMT recommendation of Assessment Type	Anticipated Assessment Area a/
Chilipepper rockfish	Benchmark	Coastwide
Quillback rockfish	Benchmark	South of 42° N. lat.
Redbanded rockfish	Benchmark	Coastwide
Rougheye/blackspotted rockfish	Benchmark	Coastwide
Sablefish	Benchmark	Coastwide
Widow rockfish	Benchmark	Coastwide
Yellowtail rockfish	Update #1 b/	North of 40° 10′ N. lat.
Yelloweye rockfish	Update #2 b/	Coastwide
Canary rockfish	Catch-Only Projection	Coastwide
Shortspine thornyhead	Catch-Only Projection	Coastwide
Black rockfish	Catch-Only Projection	Oregon
Petrale sole	Catch-Only Projection	Coastwide
Bocaccio	Catch-Only Projection	Coastwide
Vermilion/sunset rockfish	Catch-Only Projection	All Areas

a/ Pending stock definitions action(s) prior to being assessed

## Rationale for Selection of Species for Benchmark Assessments in 2025

Chilipepper rockfish

Chilipepper rockfish was most recently assessed in 2015 as an update of the 2007 benchmark assessment. Chilipepper rockfish is a commercially important species for the trawl fishery, and an increase in non-trawl mortality has been observed. Similar to widow rockfish mentioned below, the actions taken to protect California quillback rockfish are expected to continue to concentrate targeted effort on midwater rockfish like chilipepper rockfish. The GMT recommends a benchmark assessment in 2025 because of the importance to the fishery, the need for accurate estimates of sustainable harvest limits as effort increases, the time since it was last assessed, and the collection of new data.

b/ If there is only capacity to conduct one update assessment, the GMT recommends prioritizing an update for yellowtail rockfish north of 40° 10′ N. lat.

#### California quillback rockfish

The GMT recommends a benchmark assessment of California quillback rockfish to be conducted in 2025. This stock was identified as a high priority based on the results of the 2021 length-based data-moderate assessment and the subsequent overfished declaration. A benchmark assessment would allow for the inclusion of additional data relative to the 2021 length-based data-moderate assessment, although the additional data available by 2025 that could support a benchmark assessment may continue to be relatively limited. Some of the additional data sources that could be evaluated for inclusion in a benchmark assessment are the Marine Applied Research and Exploration (MARE) Remote Operated Vehicle (ROV) pending the outcome of a potential November 2024 workshop, the California Collaborative Fisheries Research Program (CCFRP), and any available ages to support the estimation of growth and annual recruitment deviations within the model.

#### Sablefish

Sablefish is a valuable groundfish species. Based on the stock status estimated in the most recent limited-update assessment conducted in 2023 and continued strong incoming recruitments, the GMT recommends that sablefish be assessed in 2025 using a benchmark assessment. Conducting a benchmark assessment in 2025 for sablefish can provide more informed estimates about recent strong recruitments due to additional observations by the fishery and survey to better inform future management while also providing the ability to address modeling issues and uncertainties identified by the 2019 Stock Assessment and Review (STAR) panel.

## Rougheye/blackspotted rockfish

The GMT recommends a benchmark assessment of rougheye/blackspotted rockfish in 2025. This cryptic species pair was last assessed in 2013. Since the previous assessment, a large number of age structures have been collected. The Northwest Fisheries Science Center (NWFSC) indicated that the Cooperative Ageing Lab (CAP) and the Oregon Department of Fish and Wildlife (ODFW) would both be available to read rougheye/blackspotted rockfish age structures if selected for assessment in 2025. Additionally, average overfishing limit (OFL) attainment from 2018 to 2022 was 69 percent, and the Annual Catch Limit (ACL) was exceeded in 2018 and 2019. A benchmark assessment would provide information on the health of these highly attained species.

#### Widow rockfish

With the concentrated effort occurring in California on shelf rockfish species and the large removals of widow rockfish coastwide in recent years, gaining a better understanding of the current population dynamics would provide critical information to inform management. Given the importance of widow rockfish to the mid-water fisheries, the GMT recommends that a benchmark assessment be done in 2025.

#### Redbanded rockfish

To date, redbanded rockfish has not been assessed. In recent years, catches of redbanded rockfish have been approximately 80 percent of the species-specific ACL contribution to the slope rockfish north complex. Redbanded rockfish is well observed by the NWFSC West Coast Groundfish Bottom Trawl (WCGBT) survey and has large numbers of lengths and age structures collected from commercial fisheries in Oregon and Washington that could support a future assessment.

## Rationale for Selection of Species for Update Assessments in 2025

The GMT recommends two species for update assessments in 2025: yelloweye rockfish and yellowtail rockfish north of 40° 10′ N. lat. Based on the NWFSC's recommendation, we have provided a prioritization ranking (Table 1), with yellowtail rockfish north of 40° 10′ N. lat. ranked as the number one priority if there are insufficient students in the University of Washington course to conduct two update assessments.

## Yellowtail rockfish North of 40° 10' N. Lat.

The yellowtail rockfish stock north of 40° 10′ N. lat. was last assessed in 2017 and is an important species to both the commercial and recreational fisheries. Given that it was last assessed in 2017, the buffer created by the sigma value will result in decreasing ACLs over time, and an update assessment will reset sigma. The GMT recommends an update assessment be conducted for yellowtail rockfish north of 40° 10′ N. lat. in 2025.

#### Yelloweye rockfish

In an effort to manage assessment workload while also providing critical information on the rebuilding status of yelloweye rockfish, **the GMT recommends an update assessment be conducted in 2025**. Based on the most recent projections, it is unlikely that the stock will be rebuilt by 2025, and an update assessment would provide updated information on the health of the stock with minimal impact on overall assessment capacity. If the stock is estimated to be rebuilt in 2025 ahead of schedule, an update assessment could be used to make a rebuilt stock status determination.

## **Catch-Only Projections for 2025**

The GMT recommends catch-only projections be conducted in 2025 for the following species and model areas: shortspine thornyhead, canary rockfish, petrale sole, bocaccio, black rockfish in Oregon, and vermilion/sunset rockfish for California and Oregon-Washington stock areas. Most of these species were selected based on anticipated management constraints where accounting for any under-attainment would maximize management flexibility for the 2027-28 biennium. Vermilion/sunset rockfish were selected to account for recent over-attainment of the California stock while conducting catch-only projections in the Oregon-Washington stock, which would account for any recent under-attainment since the 2021 assessments. The GMT acknowledges that conducting a catch-only projection for vermilion/sunset rockfish has an increased workload, relative to the other species selected, since the species has four model areas with model results needing to be aggregated to the California and Oregon-Washington stocks.

#### **Tentative Guidance for Species to Assess in 2027**

The GMT recommends that the following species be considered for assessments in 2027: black rockfish, greenspotted rockfish, lingcod, Pacific spiny dogfish, and petrale sole. The species selected should be considered for either benchmark or update assessments. The GMT has not included any recommendations for catch-only projections for 2027 and will identify these species within the 2026 assessment prioritization process.

#### Black rockfish

Black rockfish is one of the most important species to recreational fisheries coastwide. Based on its longevity, the stock assessment prioritization recommends an assessment frequency of every four years, indicating assessments in 2027 may be appropriate. Additionally, ODFW plans to

conduct the acoustic-visual survey again when funding allows, which could provide valuable assessment data for nearshore rockfish species.

### Greenspotted rockfish

Greenspotted rockfish in California waters were last assessed in 2011, at which time the northern California population was estimated to be in the precautionary zone. The average attainment of the OFL between 2018-2022 is 23 percent, but California landings from both trawl and non-trawl sectors have been increasing in recent years. Mortality could continue to increase as a result of management measures designed to limit California quillback rockfish mortality. Given the age of this assessment and the importance of greenspotted rockfish to deeper-water (e.g., shelf) recreational fisheries in California, this species should be considered for assessment in 2027. While only the area off of California has been assessed, Agenda Item F.3, Attachment 2 indicates that there is some data on greenspotted rockfish in waters off of Oregon and Washington that may be used if an assessment is considered in that region. However, no ages have been read to date for those two states.

#### Lingcod

Lingcod was last assessed in 2021 and has a recommended target assessment frequency of every 4 years. The 2021 assessments estimated the stock south of 40° 10′ N. lat. to be in the precautionary zone and the stock north of 40° 10′ N. lat. above the management target. Lingcod should be considered for assessment in 2027 since it is a target species for both the commercial and recreational fisheries coastwide.

## Pacific spiny dogfish

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 survey sampling occurs. Additionally, the assessment estimated the stock to be near 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 2021 assessment noted some areas for improvement in the survey catchability and research needs associated with movement. Currently, Pacific spiny dogfish tagging research is being done collaboratively by ODFW and Oregon State University, which could provide insight into the seasonal movement of the population and facilitate the interpretation of population observations by the NWFSC WCGBT survey. If this research is concluded in time for a 2027 assessment, that data would hopefully be able to be used to inform an assessment.

#### Petrale sole

Petrale sole is an important species for the individual fishing quota (IFQ) program and was last assessed in 2023. The 2023 stock assessment estimated the stock to be in the precautionary zone in 2026, and future ACLs are expected to severely constrain the IFQ fishery. An assessment in 2027 may provide additional information as to the trend and health of the stock.

### **Other Stock Assessment Items for Consideration**

## Pacific cod

There continues to be interest in assessing Pacific cod. However, Pacific cod off the U.S. West Coast is at the southern end of the range for that species, with the bulk of the species' distribution off British Columbia and Alaska. Therefore, coordinating a regional or transboundary assessment

may be the most appropriate assessment option. The GMT recognizes that the workload to create the needed partnerships, coordinate efforts, and agreements across management agencies to conduct a transboundary assessment of Pacific cod would be significant. However, the importance of Pacific cod to both Tribal and recreational fisheries along the northern U.S. West Coast justifies the need for this effort.

#### Cowcod

There continues to be interest in assessing cowcod. The GMT suggests cowcod should be a candidate for a future assessment but recognizes that allowing limited retention in the fisheries needs to occur prior to an assessment in order for fishery catch and biological data to be collected. Otherwise, there will not be substantive fishery-dependent information to inform the assessment.

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