

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON GROUNDFISH MANAGEMENT - ADOPT STOCK ASSESSMENTS

The Scientific and Statistical Committee (SSC) reviewed the benchmark stock assessments, Stock Assessment Review (STAR) Panel reports, and the SSC Groundfish Subcommittee (GFSC) report from the first two STAR panels during a remote meeting on September 3. STAR panel 1 covered yellowtail rockfish north of 40° 10' N. latitude. STAR panel 2 covered chilipepper rockfish and California quillback rockfish. The SSC offers the following recommendations.

Yellowtail rockfish north of 40° 10' N. latitude

The SSC reviewed the 2025 full benchmark assessment for yellowtail rockfish north of 40°10' N. lat., which was last assessed in 2017 as a benchmark assessment. Major changes from the 2017 assessment included correcting the weighting of the commercial fishery composition data, adding a combined OR-WA hook-and-line catch-per-unit-effort (CPUE) index and a Standard Monitoring Units for the Recruitment of Fishes (SMURF) recruitment index, adding foreign trawl catches from 1966 to 1976 that were omitted from the 2017 assessment, and using estimated discards instead of modeling retention curves. The 2025 assessment provides well-informed estimates of sex-specific natural mortality, growth, and unfished recruitment, and exhibits good fits to the composition data with relatively simple selectivity assumptions and fleet structure. The model was very stable, with most sensitivity runs falling within the confidence intervals of the base model. The Stock Assessors Team (STAT), STAR Panel, SSC Groundfish Subcommittee (GFSC), and SSC noted that the fishery-independent indices of biomass were fairly uninformative, indicating that bottom trawl surveys may not be the most reliable indices for this (and other) midwater rockfish species. Preliminary exploration showed relatively high biomass estimates (2014-2019) for other midwater rockfish species, suggestive of a possible environmental driver resulting in variable catchability. As a result, the SSC recommends that future assessments consider whether an environmental index could better model time-varying survey catchability. The 2025 estimated stock status is estimated to be 62.6 percent of unfished spawning output, which is above the management target of 40 percent of unfished spawning output. The 2025 estimated exploitation rate is 0.043, which is below the 0.051 management target (the exploitation rate that leads to a spawning potential ratio of 0.5).

Recommendations

The SSC endorses the 2025 benchmark assessment for yellowtail rockfish north of 40° 10' N. lat. as best scientific information available and suitable for informing management decisions. The SSC recommends that the assessment be assigned a Category 1b designation with the default sigma value of 0.5 for calculating the scientific uncertainty buffer. The SSC recommends that the next assessment be an update, unless the next assessment can be conducted as a transboundary assessment in collaboration with Canada, in which case a full assessment would be preferred.

Risk Table

The pilot application of the risk table to yellowtail rockfish north of 40° 10' N. lat. yielded a Level 2 (neutral) designation, which means that the default sigma would be retained if the risk tables

were applied. As a reminder, the Pacific Fishery Management Council recommended that risk tables be developed as a demonstration project for the 2025 stock assessment cycle, thus they are included for demonstration purposes only.

Chilipepper rockfish

The SSC reviewed the 2025 full benchmark assessment for chilipepper rockfish (*Sebastes goodei*), which was last assessed in 2007 as a benchmark assessment, along with an update assessment in 2015 and catch-only updates in 2017 and 2023. The STAT re-analyzed all data sources used in the previous assessment and updated the model structure to reflect current best practices. The major changes in data sources included removing fishery-dependent indices of relative abundance and adding a CalCOFI ichthyoplankton index, a trawl discard fleet, and bycatch from the at-sea hake fishery. Estimated stock status was 83.2 percent of unfished spawning output in 2025. Long-term equilibrium yield based on Spawning Potential Ratio (SPR) proxy harvest rates is 2,114 mt coastwide, compared to 2,230 mt based on the SB_{40%} proxy. The STAR Panel report summarized unresolved issues and challenges in estimating steepness, outliers in age data, modeling time-varying growth and selectivity, a strong retrospective pattern, poor fit to early years of West Coast Groundfish Bottom Trawl Survey (WCGBTS) index (2004-2007), and catchability (q) values greater than 1 for both the WCGBTS and Triennial survey.

Recommendations

The SSC endorses the 2025 assessment of chilipepper rockfish in U.S. waters off California, Oregon, and Washington as providing the best scientific information available and suitable for informing management decisions. The SSC recommends that the chilipepper rockfish stock be assigned a Category 1b designation with the default sigma value of 0.5 for calculating the scientific uncertainty buffer, which is consistent with the STAR Panel and GFSC recommendations. The next assessment is recommended to be an update assessment if there is no new information available to resolve issues related to time-varying growth, catchability (q) greater than 1, and applying a sum-to-zero constraint on recruitment deviations.

Risk Table

The ecosystem and environmental conditions and assessment data input categories were rated as Level 1 (favorable), whereas the assessment model fits and structural uncertainty category was rated as Level 2 (neutral). The SSC concluded an overall Level 1 (favorable) designation for the risk table, which means that the default sigma would be reduced to 0.25, if the risk tables were applied.

Quillback rockfish off California

The 2025 benchmark assessment of quillback rockfish (*Sebastes maliger*) off California is considerably more informed by data than the 2021 data-moderate assessment. In addition to including data through 2024, the new benchmark assessment included two fishery-independent indices of abundance (California Collaborative Fisheries Research Program [CCFRP] and remotely operated vehicle), a recreational fishery-dependent index, the inclusion of pre-existing and new age data as part of a unified growth fleet and updated biological relationships. These

updates produced an assessment with a similar trajectory as the data-moderate assessment, though stock status never fell below the minimum stock size threshold and the 2025 fraction of unfished spawning biomass was estimated at 43.5 percent (above the management target, $B_{40\%}$). Bridging analyses indicated that growth and natural mortality (M) were key differences. Several major uncertainties remain in the benchmark assessment, including strong retrospective patterns across the most recent five years, the determination of the most appropriate maximum age used to inform natural mortality, higher model sensitivity to age and length data than to the abundance indices, and uncertainty regarding best practices for informing growth relative to recruitment variability when including age data derived from multiple collection sources with different sampling schemes and coverage (the “growth fleet”). The influence of the growth fleet on recruitment dynamics was the focus of the majority of STAR Panel requests, and led to a single disagreement between the STAT and STAR Panel. Ultimately, the base model was modified to include only Abrams (2014) age data in the growth fleet and treated the age data from CCFRP as conditional age-at-length associated with the CCFRP fleet.

Recommendations

The SSC endorses the 2025 benchmark assessment for California quillback rockfish as best scientific information available and suitable for informing management decisions. The SSC recommends that the assessment be assigned a Category 1b designation with a sigma of 0.75. There was extensive discussion among the full SSC and during the August SSC GFSC meeting regarding the merits of Category 1b versus Category 2d. This assessment was identified as intermediate on this spectrum of assessment categories and fit best as Category 1b with a larger than default sigma. The next assessment should be a benchmark to address many of the current uncertainties.

Risk Table

The STAT determined that there is too limited information on environmental factors affecting California quillback rockfish recruitment, habitat, prey, predators, or competitors to assign a level for the ecosystem and environmental conditions column of the risk table. Assessment data inputs were categorized as Level 3 (unfavorable) due to uncertainties in the historical catch reconstructions, lack of a signal from the available indices, and limited age data. The assessment model fits and structural uncertainty were rated a Level 2 (neutral) due to pre-specified natural mortality and steepness, strong retrospective patterns, and uncertainty in recruitment patterns. The SSC concluded an overall Level 3 (unfavorable) designation for the risk table, which means that the default sigma would be increased to 0.75, if the risk tables were applied.

Table 1. Summary of SSC Recommendations: stock category and sigmas, future assessment type, and risk table category. Note that the “next stock assessment type” column does not reflect numerous and varied caveats that are reflected in this report, as well as the SSC GFSC and STAR Panel reports, which should be considered when future decisions are being made. Risk table categories are denoted for Category 1 stocks only.

Species	Stock	2025 Stock Assessment Type	Category	Sigma	Next Stock Assessment Type	Risk Table Category
Yellowtail rockfish	North of 40° 10' N. Latitude	Benchmark	1b	0.50	Update	2 - Neutral
Chilipepper rockfish	Coastwide	Benchmark	1b	0.50	Update	1 - Favorable
Quillback rockfish	California only	Benchmark	1b	0.75	Benchmark	3 - Unfavorable

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