SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON ADOPT QUILLBACK REBUILDING ANALYSES, CATCH-ONLY PROJECTIONS, AND REVISED PROJECTIONS

The Scientific and Statistical Committee (SSC) reviewed the rebuilding analyses for quillback rockfish off California, catch-only projections for chilipepper rockfish and yellowtail rockfish North of 40° 10' N. lat., revised forecasts for vermilion rockfish South of 42° N. lat., and revised projections for black rockfish off Oregon, Dover sole, and rex sole (Agenda Item E.2 Attachments 1, 2, 3, 5 and 4, respectively). The SSC also reviewed relevant SSC Groundfish Subcommittee (GFSC) reports from September 26, 2023 and November 1, 2023.

Quillback rockfish rebuilding analyses

The SSC endorses the quillback rockfish rebuilding analysis as best scientific information available (BSIA), and concurs with the GFSC that the analysis was conducted in accordance with the Terms of Reference (TOR) for Groundfish Rebuilding Analysis. The analysis used the Groundfish Management Team (GMT) estimated/projected annual removals for 2021-2024 of 15.8, 18.11, 11.12, and 10.62 mt. During its September 2023 meeting, the Council requested an alternative analysis with a 2024 removal of 6.32 mt to account for harvest restrictions already put into place (Agenda Item E.2 Attachment 1, Appendix B). All model runs assumed full attainment of ACLs for 2025 and beyond and included uncertainty and starting values based on high and low states of nature that were specified as alternative natural mortality values in the 2021 stock assessment. The model included uncertainty in recruitment deviations with a sigmaR of 0.6. The rebuilding plan was set to start in 2025, with an estimated minimum time for rebuilding of 20 years (T_{MIN}=2045) and a mean generation time of 26 years, which resulted in a maximum time to rebuild of 46 years (T_{MAX}=2071). The analysis explored an appropriate range of alternative rebuilding strategies as specified in the TOR.

The SSC discussed some aspects of the 2021 stock assessment for quillback rockfish off California that were relevant to the 2023 rebuilding analyses. In 2021, the SSC reviewed the 2021 assessment and endorsed it as BSIA for use in management and the Council adopted the assessment after considering several discussions presented in SSC statements and GFSC reports that are reflected in the record for Council meetings in June 2021 (Agenda Item G.5.a Supplemental SSC Report 1), September 2021 (Agenda Item C.6.a Supplemental SSC Report 1) and November 2021 (Agenda Item E.2.a Supplemental SSC Report 1). Those reports characterize the SSC's conclusions about the assumptions, strengths, and limitations of the 2021 assessment.

The SSC received public comment at this meeting relevant to the assessment and rebuilding analysis and determined that many of the scientific aspects of the public comments had been previously considered in the construction and review of the 2021 assessment. Other comments suggested issues and approaches that will be considered as research and data needs to be addressed before the next quillback rockfish assessment.

Catch-only projections and revised projections

The SSC reviewed the following catch-only projections and revised projections and found them to be technically sound:

- Catch-only projection for chilipepper rockfish, which corrects an earlier error that had resulted from using the 2015 assessment update rather than the 2017 catch-only projection as the basis for the new projection (Attachment 2).
- Catch-only projection for yellowtail rockfish north of 40°10' N. lat., which corrects previous errors and uses the 2017 benchmark assessment (Attachment 3).
- Revised projections for Black rockfish off Oregon, Dover sole, and rex sole, which were requested by Council in September 2023 (Attachment 4).

The SSC reviewed the revised catch-only projections for vermilion rockfish south of 42° N. lat. (Supplemental Revised Attachment 5) and found them to be technically sound. The most recent stock assessments for vermilion rockfish south of 42° N. lat. modeled the population dynamics separately for areas north and south of Point Conception, approximately 34° 27′ N. lat. Buffers between the OFL and the ABC were calculated using a P* of 0.45. Since the assessments for the northern and southern areas were assigned categories of 1 and 2, respectively, a weighted σ for the statewide stock was used to calculate the buffers based on the OFL for each stock (Agenda Item H.3.a, NWFSC Report 1, June 2023).

Scientific and Statistical Committee's Groundfish Subcommittee Report on 2025-2026 Harvest Specifications

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November 1, 2023

The Scientific and Statistical Committee's (SSC)'s Groundfish Subcommittee (GFSC) met November 1, 2023 to review the catch-only projections for chilipepper rockfish and yellowtail rockfish north of 40° 10' N. lat. as well as the harvest specification for vermilion rockfish in California combining assessment areas. Recommendations are provided to inform SSC discussions regarding endorsement of harvest specifications for 2025 and beyond.

Catch-Only Projection for Chilipepper Rockfish

During the September 2023 meeting, the GFSC noted that the 2019 catch-only projections for chilipepper rockfish incorrectly used the 2015 model, which included an incorrect catch history, rather than the 2017 model, which corrected errors in the catch history. As a result, the GFSC requested that catch-only projections be updated to use the revised model and catch history. The GFSC reviewed Attachment 2, which documents this revised analysis, and received a presentation from Chantel Wetzel (NMFS NWFSC). The revised analysis uses the 2017 model for the basis of a catch-only projection with time-varying buffers starting in 2015. Catches between 2017-2022 from the Groundfish Expanded Mortality Multiyear (GEMM) report split by fleet are fixed as the known catches. The removals for 2023 and 2024 were set equal to mortality projections provided by the Groundfish Management Team (GMT). For years 2025 beyond, catches were set equal to the projected Acceptable Biological Catch (ABC) based on a category 1 time-varying sigma (σ) and a P* value of 0.45. Chilipepper rockfish are managed north and south of 40°10′ N. lat. with the estimated Overfishing Limits (OFLs) and ABCs split by area based on the historical landings of 93 percent and 7 percent of catch occurring south and north of 40°10′ N. lat., respectively. The GFSC discussed and endorsed the revised harvest specifications.

Catch-Only Projection for Yellowtail Rockfish North of 40°10' N. lat.

During the September 2023 meeting, the GFSC noted that catch projections for yellowtail rockfish north of 40°10'N were done incorrectly in the past and requested an update to fix these errors. The GFSC reviewed Attachment 3, which documents the revised analysis, and received a presentation from Chantel Wetzel (NMFS NWFSC). The revised analysis uses the 2017 benchmark assessment and updates catches between 2017-2022 to the removals by year from the GEMM. The removals for 2023 and 2024 were set equal to mortality projections provided by the GMT. For years 2025 beyond, removals were set equal to the projected ABC) based on a category 1 time-varying σ and a P* value of 0.45. The catches starting in 2025 were set equal to the average catches by fleet

between 2017-2024. The GFSC discussed and endorsed the revised harvest specifications.

Revised Harvest Specifications for Vermilion Rockfish in California

The GFSC received a report from E.J. Dick (NMFS SWFSC) on the revised harvest specifications for vermilion rockfish and sunset rockfish in California. The most recent stock assessments modeled the population dynamics separately for areas north and south of Point Conception, roughly 34° 27' North latitude. Buffers between the OFL and the ABC were calculated using a P* value of 0.45. Since the assessments for the northern and southern areas were assigned categories of 1 and 2, respectively, a weighted σ for the statewide stock was used to calculate the buffers based on the OFL for each stock. The GFSC endorsed this process and the revised harvest specifications.

Harvest Specifications for Remaining Species

The GFSC reviewed the harvest projections Dover sole, Oregon black rockfish, and rex sole that were requested by Council in September 2023 (Agenda Item E.2, Attachment 4, November 2023). The Dover sole harvest projections were based on the 2021 assessment using the sigmas for 2020 and beyond, a P* value of 0.45 with assumed removals equal to the adopted ACL in 2023-24. The Oregon black rockfish projections were based on the 2023 assessment using the sigmas for 2020 and beyond, and assumes a P* value of 0.45, sigma value of 0.5, and removals of 466 mt in years 2023 and 2024. The rex sole projections were based on the 2023 assessment using sigmas for 2020 and beyond and assumes a P* value of 0.40. The GFSC endorsed these harvest projections.

Appendix 1

Subcommittee Members in Attendance

Dr. Cheryl Barnes, Oregon State University/ODFW, Newport, OR
Dr. John Budrick (SSC GFSC Chair), California Department of Fish and Wildlife, San Carlos, CA
Dr. John Field, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA
Dr. Chris Free, University of California at Santa Barbara, Santa Barbara, CA
Dr. Owen Hamel, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Kristin Marshall, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Tommy Moore, Northwest Indian Fisheries Commission, Forks, WA
Dr. André Punt, University of Washington, Seattle, WA
Dr. Jason Schaffler, Muckleshoot Indian Tribe, Auburn, WA
Dr. Tien-Shui Tsou, Washington Department of Fish and Wildlife, Olympia, WA

PFMC
11/04/23