



Mr. Marc Gorelnik
Chair, Pacific Fishery Management Council
7700 NE Ambassador Pl # 101
Portland, OR 97220

June 21, 2021

Re: G.6. 2023-2024 Harvest Specifications and Management Measures Planning

Dear Chair Gorelnik and Council members,

We are writing to request at its June 2021 meeting the Council add an item titled “Prohibition on Directed Fishery for Shortbelly Rockfish” to the list of Council-prioritized new management measures for the Groundfish 2023-2024 specifications cycle. We urge the Council to move this management measure forward as a work priority for the GMT, and ensure the GMT include this item in the September Report for Workload and New Management Measures. We request a prohibition on development of a directed fishery for shortbelly rockfish be in the report’s tables that summarize prioritized items, listed analysts assigned, and included progress to date.

We thank the Council for its March 2021 motion under G.2 adding “a prohibition on a directed fishery for shortbelly rockfish to the list of potential management measures and consider in June 2021 whether to include it in the 2023-2024 harvest specifications and management measures.” The Council took this special action when it recognized the vulnerability of this critical forage species to a new directed fishery.

Specifically, there are no measures in the FMP that prevent targeting shortbelly rockfish and the species is not subject to catch limits. These measures were withdrawn in June 2020 when the Council moved shortbelly rockfish from the actively managed species category in the Groundfish Fishery Management Plan (FMP) to the Ecosystem Component species category. This change was implemented with FMP Amendment 29 to the Groundfish Fishery Management Plan. With this amendment, key reference points and accountability measures required under the Magnuson-Stevens Fishery and Conservation Act (MSA) were removed: Overfishing Limit, Allowable Biological Catch, Annual Catch Limit, and Minimum Stock Size Threshold. With no legally accountable management measures in place, this action left the species vulnerable to the development of a directed fishery.

The California Department of Fish and Wildlife, in its November 2020 letter to Mr. Barry Thom, NMFS Regional Administrator, expressed that it did not support a rulemaking to change shortbelly rockfish’s management category to Ecosystem Component Species.

The high vulnerability of shortbelly rockfish to a directed fishery is also of great concern to our organizations. Audubon, Oceana and the Pacific Seabird Group¹- a society of professional seabird researchers and managers- have described the foundational importance of shortbelly rockfish to breeding and migratory seabirds. The Council itself has noted the importance of shortbelly rockfish to the ecosystem, including larger predatory fish. Those summaries are included in Appendix A.

With no catch limits in place, we believe Council action to enact a directed harvest prohibition may be urgent. Continued growth in global aquaculture increases the associated demand for fish meal and fish oil rendered from small forage fish. As the Council has previously noted,

Demand for [forage fish] in the production of fishmeal has mainly been driven by the spectacular growth of global aquaculture, which is expected to continue into the foreseeable future.²

Nearly a quarter of all wild-caught fish are used for aquaculture feed, amounting to nearly 20 million tons a year.³ This past month alone, the Mid-Atlantic Fishery Management Council considered an Exempted Fishing Permit application for purse seine capture of 3300 tons per year of threadfin herring, even though the species is included in this Council's Mid-Atlantic Unmanaged Forage Omnibus Amendment. This underscores the real-time pressure on industrial scale fisheries for forage fish to supply global markets. NMFS recent push to expand offshore finfish aquaculture through Aquaculture Opportunity Areas further highlights this continued global trend.

Fish meal and fish oil are the two most common fish-based products in aquaculture feeds. These substances provide protein and compounds, like omega-3 fatty acids, that help keep fish healthy. For this reason, almost all aquaculture feeds rely at least partially on feed made from wild-captured fish. Use of fishmeal doubled between 1995 and 2007, though this has stabilized since that time with the introduction of more plant-based feed.⁴ We don't have information on the suitability of shortbelly rockfish for fish feed or other reduction uses.

We thank the Groundfish Advisory Panel for considering our presentation in March 2021 on the threat from global aquaculture. We have taken to heart the GAP's recommendation to "continue working with fishery participants and processors for further discussion," through ongoing conversations with GAP members and others. The trawl sector has no intention of targeting shortbelly rockfish and puts considerable time and energy into tracking and avoiding them. The trawl and other groundfish sectors must balance avoiding shortbelly rockfish with avoidance of Rockfish Conservation Areas as well as ESA-listed salmonid species.

¹ <https://pacificseabirdgroup.org/>

² <https://www.pcouncil.org/documents/2015/03/agenda-item-e-4-a-attachment-1.pdf/>

³ Cashion, Tim, et al. "Most Fish Destined for Fishmeal Production Are Food-Grade Fish." *Fish and Fisheries*, vol. 18, no. 5, 2017, pp. 837-844., doi:10.1111/faf.12209.

⁴ https://foodprint.org/wp-content/uploads/2020/10/2020_09_29_FP_Aquaculture_Report_FINAL-1.pdf

As we noted in a prior letter, the Council’s Comprehensive Ecosystem-Based Amendment-1⁵ provides good precedent for a set of Council actions related to shortbelly rockfish. CEBA-1 had the expressed Purpose and Need to “prohibit new directed commercial fishing in Federal waters on unmanaged, unfished forage fish species until the Council has had an adequate opportunity to both assess the scientific information relating to any proposed directed fishery and consider potential impacts to existing fisheries, fishing communities, and the greater marine ecosystem.” The Council achieved this objective through NMFS implementing regulations that laid out a short, straightforward set of landings and processing limits for those species, based on an analysis of incidental catches in the preceding years.⁶

In Spring 2020, building on the approach used to implement the directed fishing prohibition for the CEBA-1 forage species, the GMT started to analyze and develop a set of practicable measures to prevent the development of a directed fishery for shortbelly rockfish that would not interfere with fleet operations or efficiencies. However, due to the COVID pandemic, there was not sufficient time to conduct the necessary analyses to inform similar measures for shortbelly rockfish. The Council now has the opportunity to determine the best way to implement a directed fishing prohibition for shortbelly rockfish through a Groundfish FMP amendment during the 2023-24 specifications process. Industry members are key participants for developing this pathway in order to achieve the objective without interfering with fleet operations. A fruitful approach may be to set annual or multi-trip landings limits low enough to prevent economic viability for a reduction fishery, but high enough to accommodate lightning strikes by the groundfish fleet.

Finally, we appreciate the completion of a new management measure that was prioritized by the Council in 2019: Catch Accounting for shortbelly rockfish. As the GMT noted in April, shortbelly rockfish is again available on the public groundfish scorecard (Report GMT007) on the PacFIN Reports Dashboard⁷. This is helpful to public understanding of trends in incidental catch and provides a clear link to the Council’s intention to address incidental catch of shortbelly rockfish should the incidental catch in a calendar year approach 2000 tons.

In sum, we urge the Council at its June, 2021 meeting to add as a work priority for the GMT an item titled “Prohibition on a fishery for shortbelly rockfish” to the Council-prioritized list of new management measures for the groundfish 2023-2024 specifications cycle, and ensure the GMT include this item in the September Report for Workload and New Management Measures. We appreciate your attention to our comments and your dedication to sustainable fisheries.

Sincerely,

Anna Weinstein
Director, Marine Conservation
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⁵ <https://www.fisheries.noaa.gov/action/fisheries-west-coast-states-comprehensive-ecosystem-based-amendment-1-amendments-fishery>

⁶ Implementing Regulations for CEBA 1: FR 19054, April 4, 2016. Also see Compliance Guide at https://archive.fisheries.noaa.gov/wcr/publications/fishery_management/ecosystem/secg_ceba1.pdf

⁷ <https://reports.psmfc.org/pacfin/F?p=501:1000>:

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Appendix A

From: Pacific Seabird Group, letter to Council August 28, 2020 for: Agenda Item c.7: Future Council Meeting Agenda and Workload Planning (September 2020 meeting)

As central-place foragers, breeding seabirds rely on availability of high-quality forage (e.g., shortbelly rockfish) in close proximity to nesting locations. Proportions of preferred prey items, such as YOY rockfish, in diets of seabirds show strong correlations with fishery abundance estimates from acoustic surveys (Thayne et al. 2019). Studies link high occurrence and availability of YOY rockfish with high reproductive success and increases in productivity for sensitive species, such as the federally endangered California Least Tern (*Sterna antillarum browni*) and federally threatened Marbled Murrelet (*Brachyramphus marmoratus*; Robinette et al. 2016, Becker et al. 2007). Conversely, declines in availability of juvenile rockfish have been linked to decreases in both productivity and population sizes for species such as Brandt's Cormorants (*Phalacrocorax penicillatus*; Elliot et al. 2015). Additional diet studies have revealed positive correlations between chick growth and proportions of juvenile rockfish present in chick diet (Thayer and Sydeman 2007).

As important components of dynamic marine food webs, changes in availability of YOY rockfish may cause non-target impacts. For example, offshore breeding seabirds, such as Common Murre (*Uria aalge*), move nearshore in search of northern anchovy when juvenile rockfish are not available in offshore waters. When birds move nearshore, they consume higher levels of out-migrating juvenile salmonids (Wells et al. 2017).

From Audubon/Oceana letter to Council March 1, 2021

As recognized by the Council's Fishery Ecosystem Plan:

Small pelagic fish form a critical link in the strong, upwelling-driven high production regions of the [California Current Ecosystem (CCE)]... six of the top 10 most abundant species throughout this long time period are northern anchovy, Pacific hake, Pacific sardine, jack mackerel, and rockfish (shortbelly rockfish (*S. jordani*) and unidentified Sebastes, as most species are not identifiable to the species level). Persistent dominance

of the ichthyoplankton of relatively few CCE species indicates that the relative abundance and importance, at least in the southern part of the CCE, of these key species is far greater than most other lower trophic level species.

Shortbelly rockfish are important prey to thresher sharks,ⁱ longnose skate,ⁱⁱ Humboldt squid,ⁱⁱⁱ and larger rockfish including bocaccio and chilipepper rockfish.^{iv} Juvenile rockfishes and northern anchovy are the two most important prey items for Chinook salmon in the San Francisco Bay region.^v In its description of essential fish habitat, the Council's Highly Migratory Species FMP indicates shortbelly rockfish are important prey for common thresher sharks and both juvenile and adult broadbill swordfish.^{vi} Their trophic position and life history with wide swings in abundance make shortbelly rockfish more akin to forage fishes than other groundfish.^{vii}

i Preti, A., S.E. Smith and D.A. Ramon. 2004. Diet differences in the thresher shark (*Alopias vulpinus*) during transition from a warm-water regime to a cool-water regime off California-Oregon, 1998–2000. CalCOFI Reports 45:118-125

ii Robinson, H.J., Cailliet, G.M. & Ebert, D.A. 2007. Food habits of the longnose skate, *Raja rhina* (Jordan and Gilbert, 1880), in central California waters. *Environ Biol Fish* 80, 165.

iii Field, J.C., MacCall, A.D., Bradley, R.W., and Sydeman, W.J. 2010. Estimating the impacts of fishing on dependent predators: a case study in the California Current. *Ecological Applications* 20(8):2223-2236.

iv Love, M. 1996. Probably more than you want to know about the fishes of the Pacific Coast, Second Edition. Really Big Press, Santa Barbara, CA.

v Healey, M. C. 1991. Life history of chinook salmon. In C. Groot and L. Margolis, (eds.), *Pacific salmon life histories*, p. 311–393. Univ. British Columbia Press, Vancouver, Canada, 564 p.

vi PFMC 2018. HMS FMP as Amended up to Amendment 5. Section 7.2.10. and PFMC 2003. Appendix A to the Fishery Management Plan and Environmental Impact Statement for U.S. West Coast Fisheries for Highly Migratory Species Life History Accounts and Essential Fish Habitat Descriptions <https://www.pcouncil.org/documents/2003/08/hms-fmp-essential-fish-habitat-life-history-accounts-and-essential-fish-habitat-descriptions.pdf/>

vii Lenarz, W.H., 1980. Shortbelly rockfish, *Sebastes jordani*: a large unfished resource in waters off California. *Mar. Fish. Rev.* 42, 34–40.