OREGON DEPARTMENT OF FISH AND WILDLIFE REPORT ON STOCK DEFINITIONS
FINAL PREFERRED ALTERNATIVE

The Oregon Department of Fish and Wildlife (ODFW) provides the following information for consideration in developing a Final Preferred Alternative (FPA) for stock definitions for black, blue, deacon, copper, and quillback rockfish off Oregon.

Amendment 31

Under Amendment 31 to the Pacific Coast Groundfish Fishery Management Plan (FMP; PFMC 2025), the Pacific Fishery Management Council (Council) adopted revised stock definitions for fourteen recently assessed species, including black, copper, and quillback rockfish. Specifically:

- Black rockfish were defined as three separate stocks, one for each of the states of California, Oregon, and Washington.
- Copper rockfish were defined as two stocks, divided at 42° N latitude (the California/Oregon border), with a combined stock for Oregon and Washington.
- Quillback rockfish were similarly defined as three separate stocks, one for each state.

While that process may not have been ideal, there have been no new stock assessments nor substantial changes in the fisheries for these species that would suggest a revision to these previously adopted definitions is warranted. As such, **ODFW recommends maintaining the current stock definitions for black, copper, and quillback rockfish as established under Amendment 31**.

The remainder of this report provides information should the Council wish to reconsider its previous actions on black, copper, and quillback rockfish, as well as some information on blue and deacon rockfish, which have yet to be defined.

Determining if a Stock is in Need of Federal Fisheries Management

In determining if a species/stock is in need of federal fisheries management, ODFW believes that predominance in federal waters should not automatically supersede evaluating the factors from the 10-Factor analysis. "If mortality was less than 25 percent in the EEZ, the species would be identified for a thorough 10-factor evaluation under §600.305(c) in order to ascertain if the species should be retained for management in the FMP, removed from the FMP, or designated as an ecosystem component (EC) species." Agenda Item E.6. Attachment 1, June 2025

Using "predominance of catch in federal waters" to determine whether a species or stock should remain in the FMP is concerning due to the confounding effects of spatially restrictive management measures. As an example, during 2004 through 2022, the Oregon recreational bottomfish fishery was restricted to inside of the 40-fathom regulatory line for up to six months per year, April through September. Off most of Oregon, the 40-fathom regulatory line is very close to the three-nautical mile line that separates state and federal waters (Figure 1). There were also months during some years when the fishery was restricted to inside of the 30- and even 20-fathom lines, due to concerns over overfished rockfish species. Therefore, catches of black, blue,

and deacon rockfish have been regulatorily constrained to state waters during the periods of most effort (summer months) during all but one year (2018-19, 2021-23) used in the analysis (Agenda Item H.6. Supplemental REVISED Attachment 1, March 2025). Only beginning in 2023, following progress in yelloweye rockfish rebuilding, was the Oregon recreational fishery allowed to operate in federal waters year-round, including during high-effort and landings summer months. Therefore, the catch location data used in the analysis does not represent an unrestricted spatial distribution of fishing effort and may not accurately reflect the actual distribution of biomass across state and federal waters.

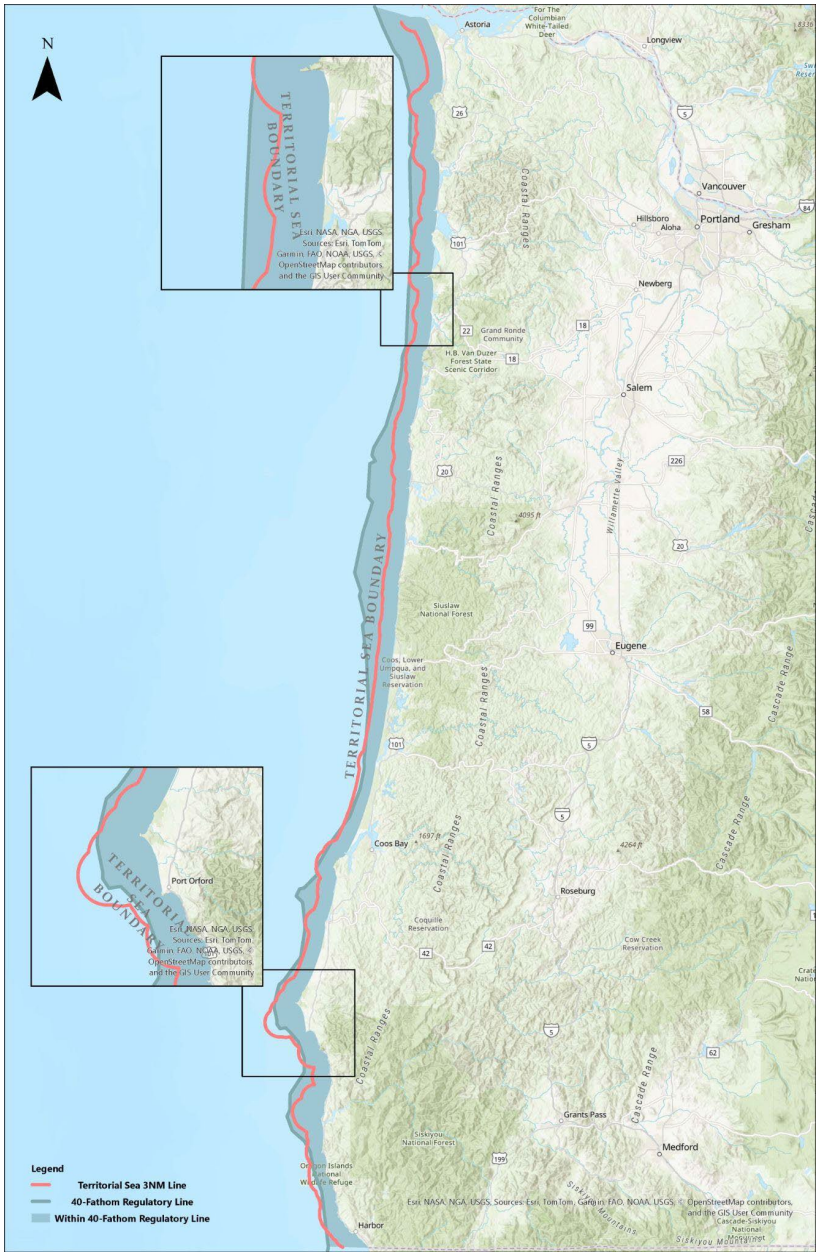

Figure 1. Map of the Oregon Coastline with the 40-fathom regulatory line and three nautical mile state-waters line.

Similarly, the commercial non-trawl rockfish conservation area (RCA) restricted fishing access between the 30-fathom regulatory line and the 100-fathom regulatory line from 2004-2023 (Figure 2) with a special provision to allow dinglebar fishing between the 30- and 40-fathom lines. The seaward boundary was extended to the 125-fathom regulatory line in southern Oregon from 2009-2011. While this non-trawl RCA is still in place, these restrictions were somewhat relaxed starting in 2023 with the allowance of non-bottom contact gears and further relaxed in 2024 when the seaward boundary line was moved to the 75-fathom regulatory line. However, the provision for dinglebar fishing between the 30- and 40-fathom line was removed. This non-trawl RCA is another regulatory constraint that has forced black, blue, and deacon rockfish to be caught primarily within state waters.

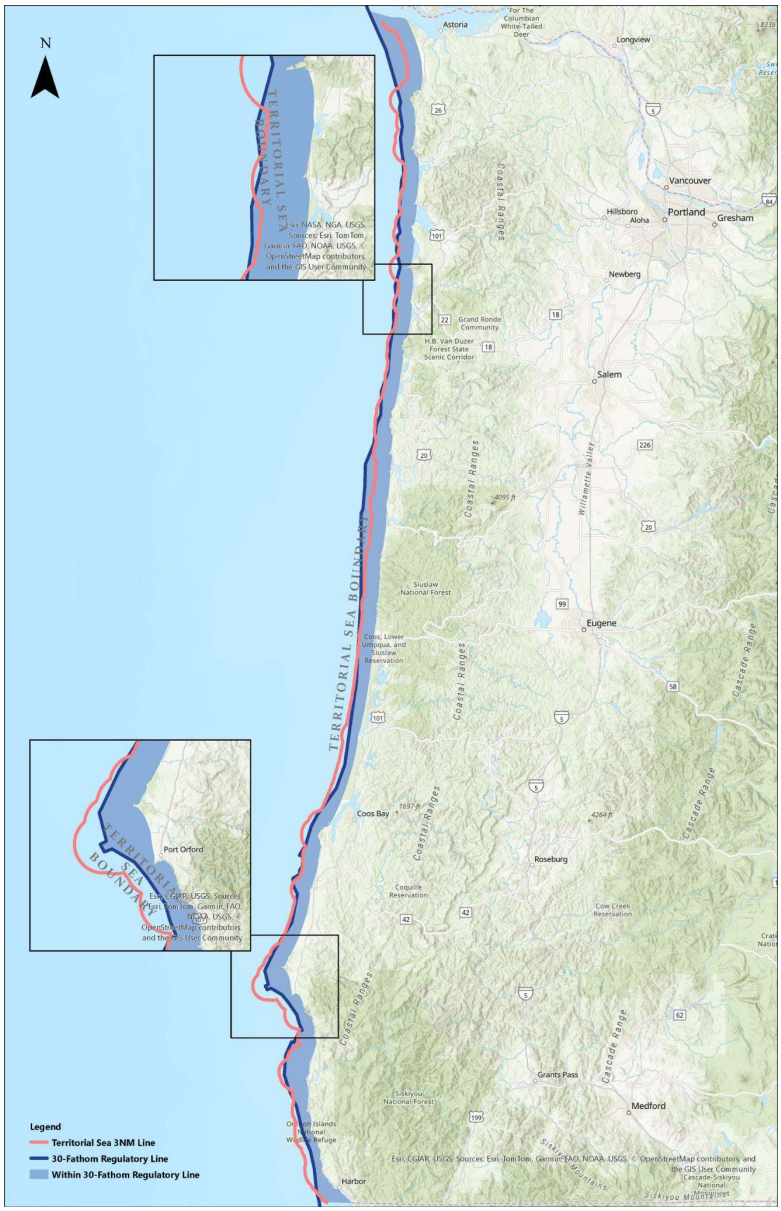

Figure 2. Map of the Oregon Coastline with the 30-fathom regulatory line and three nautical mile state-waters line.

In June of 2025, the Council reviewed analytical documents and reports from advisory bodies in adopting the preliminary preferred alternative (PPA). **ODFW notes that the Groundfish Management Team (GMT) recommended that black, blue/deacon, copper, and quillback rockfish off Oregon remain in the FMP** (Agenda Item E.6.a, Supplemental GMT Report 2, June 2025).

> "Factors (i) and (iv) through (vii) are met, because the stocks are economically important to the OR and WA fisheries. While the analysis indicates that some of these species are not currently caught >25 percent in the EEZ (blue and deacon rockfishes off both states; black and quillback rockfishes off OR), the economic importance and scale of interaction with directed groundfish fisheries indicates that conservation and management is needed and could improve or maintain the condition of the stock (factor iii). Additionally, there are concerns that the fishery has been restricted by area closures (Rockfish Conservation Areas and recreational depth restrictions) in Federal waters, thus forcing the fishery to exist mainly in state waters. Yelloweye rockfish is trending toward being rebuilt in the very near future, which could provide access to previously unfished grounds in Federal waters, demonstrating that the fishery exists there and that an FMP could actively manage the resource."

ODFW concurs with the GMT's recommendations that black, blue, deacon, copper, and quillback rockfish off Oregon remain in the FMP.

Economic Importance of the Groundfish Fisheries (Factors ii, iv, v, and vi)

The recreational bottomfish fishery brings approximately $20 million annually and an estimated 356 jobs in small coastal Oregon communities (ODFW 2024a). That money then gets circulated both in coastal counties, but also throughout the state. The bottomfish fishery provides year-round opportunities for anglers and fishing related businesses, whereas other popular fisheries such as salmon and tuna are only available seasonally. Additionally, both salmon and tuna have large interannual variability in opportunity compared to the more consistent and dependable bottomfish fishery. Many charter operators and fishing related businesses rely on the bottomfish fishery to help sustain businesses during the "off months" for other fisheries. It is also an opportunity for recreation and locally sourced nutritious food for private anglers year round.

Oregon waters also support a limited-entry commercial fishery that targets rocky reef-associated groundfish species. State-issued limited entry permits allow for harvesting of black, blue, and deacon rockfish (42 permits) or black, blue, deacon rockfish plus other nearshore species (65 permits; Figure 3). Permitted vessels are restricted to 2-month landing limits by species. The vessels that participate in this fishery are small, often with a crew of one or two that use fixed gear, often bottom longline or recreational-like rod and reel gear. The nearshore fishery is often part of a portfolio of fisheries that the vessels participate in.

There is a lucrative live fish market that often fetches 2-3 times more per pound than the fresh dead market, depending on species. With the combination of live and fresh fish, the commercial fishery had an ex-vessel value of $1.14 million in 2023, the most recent year of complete data (ODFW 2024b). Approximately half of the effort, landings and revenue are based in southern Oregon ports: Port Orford, Gold Beach, and Brookings (ODFW 2024b).

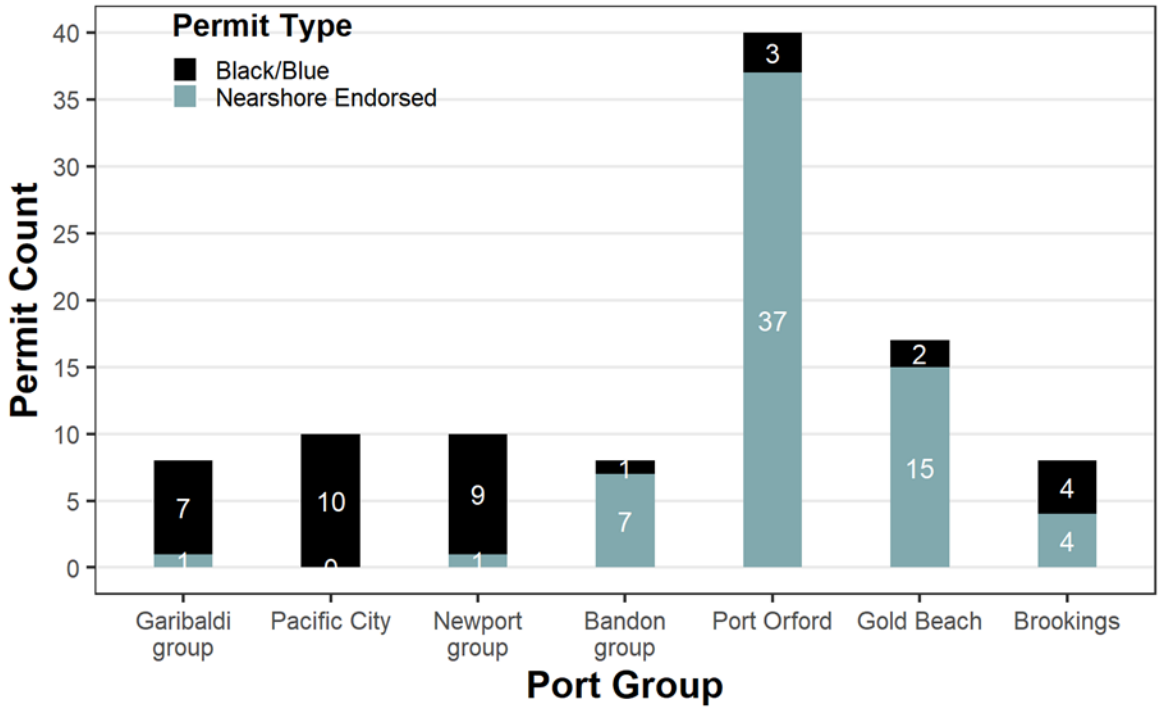

Figure 3. Oregon commercial nearshore permits by type and port in 2023 (ODFW 2024b).

Information on Individual Species

Black Rockfish

Black rockfish make up 70-80 percent of the recreational bottomfish catch in numbers of fish annually off Oregon, with an average of 75 percent for 2020 through 2024 (Figure 4). Black rockfish account for approximately 60-65 percent of the landed catch, in pounds, and 35-40 percent of the value in the commercial nearshore fishery off Oregon (Figure 5). This shows the importance of black rockfish to both the Oregon recreational and commercial nearshore fisheries. Regulations for the recreational fishery are primarily based on black rockfish - as goes black rockfish, so goes the recreational fishery. Daily general marine bag limits may be adjusted based on the allowable harvest of black rockfish. Bag limit changes have nominal impact on other species as they tend not to be the target of anglers. In 2017, reaching the Oregon recreational harvest guideline for black rockfish in September caused the entire bottomfish fishery to close for the remainder of the year since black rockfish accounts for most of the catch.

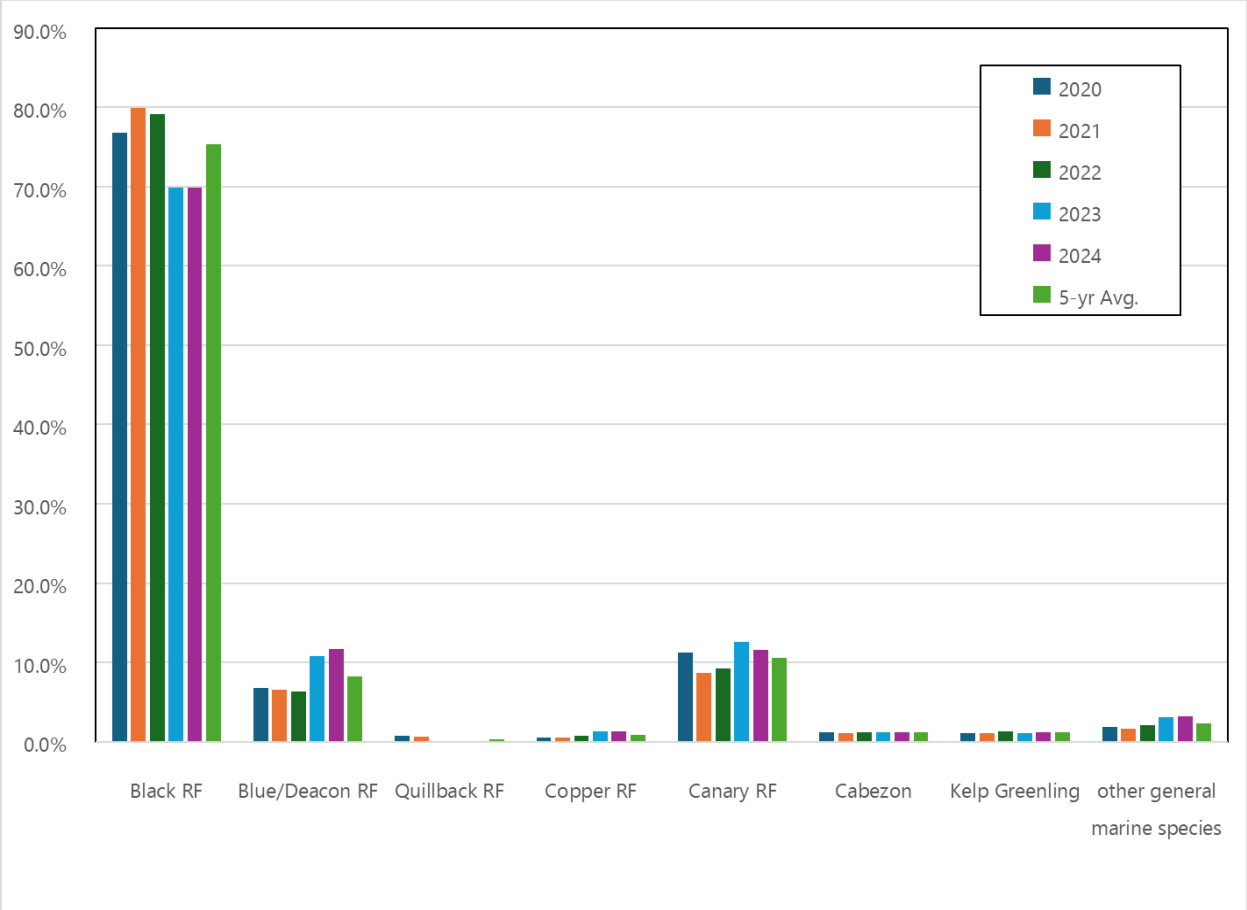

Figure 4. Percentage of number of recreational bottomfish landed by species in the Oregon recreational bottomfish fishery, 2020-2024 with 5-year average.

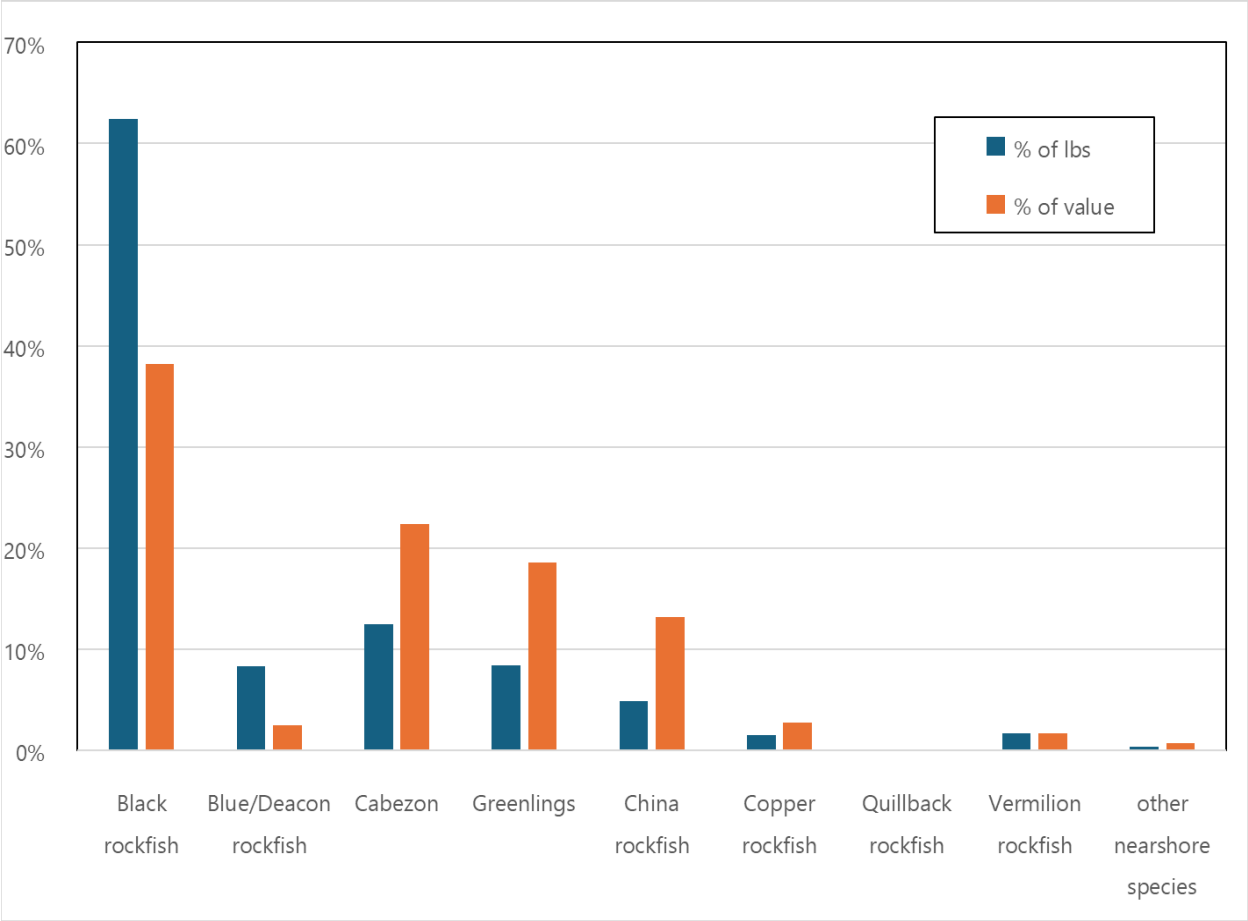

Figure 5. Percentage of pounds and value of landed fish in the Oregon commercial nearshore fishery in 2023 (ODFW 2024b).

Quillback rockfish

The 2021 assessment of quillback rockfish off Oregon showed that the stock is healthy, at 47 percent of unfished biomass, above the 40 percent B_{MSY} threshold in the FMP, but with a lower total biomass than previously determined. The maximum sustainable yield (MSY) was estimated to be 3.46 mt, not enough to allow for any directed fishing or landings. To keep total impacts (landings plus mortality) within the sustainable limit, the State of Oregon proactively prohibited the retention of quillback rockfish in the recreational and all non-trawl commercial fisheries beginning January 1, 2022. That prohibition remains in place in 2025, and likely until another assessment is conducted.

Prior to the prohibition on landing, quillback rockfish had high opportunistic value to both recreational anglers and commercial fishery participants. Recreational anglers and charter captains welcomed the "splash of color" in the daily bag. The commercial live fish fishery paid $3.50 to $5.30 per pound for quillback rockfish in 2021, the last year retention was allowed, compared to $1.60 to $2.00 per pound for black, blue, and deacon rockfish (ODFW, 2022). Therefore, while quillback rockfish did not provide a large volume of fish landed, the fish that were landed were of higher value to the fishery participants than some other species.

Copper rockfish

Similar to quillback rockfish, copper rockfish may not be a primary target of most recreational or commercial fishery participants; however, they have high opportunistic value. In 2023, the live fish market paid $5.75 per pound for copper rockfish because these colorful fish are more desirable in that market (ODFW, 2024b) than black, blue, and deacon rockfish. Recreational anglers also enjoy the splash of color in their bag. An exception to targeting is recreational fishing in Coos Bay on the southern Oregon coast. Copper rockfish are a popular catch from both boat- and beach-based recreational anglers fishing within Coos Bay.

Blue/Deacon Rockfish

Unlike the other species in this report, blue and deacon rockfish have not been previously defined in the FMP. Blue and deacon rockfish off Oregon are currently managed in a complex with black rockfish, which as mentioned above has previously been defined in the FMP. This would indicate that blue and deacon rockfish should be treated the same as black rockfish, at least off Oregon. This aligns with Utilization Objective 10 in the Groundfish FMP, "Recognize the multispecies nature of the fishery and establish a concept of managing by species and gear or by groups of interrelated species."

Studies conducted off the coast of Oregon have shown that deacon rockfish settle in both nearshore and offshore habitats, although the magnitude of settlement in each area remains unknown (Rasmuson et al. 2021). The same study also concluded that settlement in both environments suggests movement between nearshore and offshore areas is not strictly ontogenetically driven. Vaux et al. (2019) compared population genetics and otolith morphology between the two areas, finding little evidence of differentiation in otolith morphology and no evidence of genetic differentiation. These findings indicate that the two segments of the population are connected; however, the degree of connectivity during each life stage remains unclear (Rasmuson et al. 2021).

Additionally, during the 1990s and early 2000s, a shore-based commercial fishery in Oregon operated at Cobb Seamount (approximately 280 nautical miles northwest of the mouth of the Columbia River) and harvested blue rockfish (Dr. Leif Rasmuson, pers. comm.; ODFW, 2011). This supports the conclusion that blue/deacon rockfish are not exclusively a nearshore species.

Blue/deacon rockfish account for six to eleven percent of the recreational bottomfish catch, in numbers of fish, annually off Oregon (Figure 4). Blue and deacon rockfish are regularly found in mixed schools with black rockfish, with anglers catching them while trying to target black rockfish. Novice anglers often have difficulty distinguishing between blue/deacon rockfish and black rockfish, which can complicate reporting and regulations. Black, blue, and deacon rockfish combined account for an average of 83 percent of the total recreationally caught general marine bag off Oregon annually (Figure 4).

Blue and deacon rockfish account for approximately ten percent of the landings and two to five percent of the value of the commercial nearshore fishery (ODFW, 2024b). While not a large percentage of the catch or value, these species help fill in when bi-monthly limits of other species have been reached. Additionally, blue and deacon rockfish are more commonly landed into north coast ports than south coast ports, since most of the black and blue/deacon rockfish limited entry permit holders fish out of these ports (Figure 3).

Treatment of Components of Stocks of a Species (Factors iii and vii)

There should be consideration for keeping all components (areas) of a federally managed species in the FMP for some species. If the stock off one area remains in the FMP, then all stocks of that species should remain in the FMP for consistency in management authority over the range of that species. In some cases, there are biological or ecological factors that would support this. In particular, semi-pelagic species such as black, blue, and deacon rockfish which have been shown to have some north/south geographic movement likely warrant additional discussion, particularly by the Scientific and Statistical Committee which did not have time to do a thorough review in June. This may not be necessary for more demersal sedentary species such as cabezon.

The SSC (Agenda Item E.6.a Supplemental SSC Report 1, June 2025) **did recommend that the Council:**

> **"… keep all spatial components of a species in the FMP if at least one component qualifies for inclusion. Doing so would account for considerable uncertainty in stock structure and maintain data collection and research coordination for the would-be-excluded spatial components. Consistent data collection and research on these components will be vital to increase confidence in stock boundaries, now and under changing ecological conditions**."

Black rockfish and/or blue and deacon rockfish are key species that should have this consideration. During the 2023 assessments for black rockfish, it was noted in the California assessment (Agenda Item G.2, Supplemental REVISED Attachment 8, September 2023) that:

> "Although most black rockfish show moderate to high site fidelity and some degree of homing, a notable proportion of fish appear to cross stock boundaries. Additional research on the directions and distances that black rockfish move in northern California and southern Oregon would help elucidate the degree of intergenerational exchange across this particular stock boundary."

There are numerous reports that most black rockfish display small home ranges. A sizable percentage (approximately 10 to 30 percent), however, have moved considerable distances. " Of the 65 black rockfish recaptured by the California Collaborative Fisheries Research Program (CCFRP) from 2007 to 2022, the maximum Euclidean distance traveled was 918 km. The overall mean distance traveled was 180 ± 316 km, with 26.2% of recaptured fish (n = 16) moving greater than 250 km" (Figure 6; Agenda Item G.2, Supplemental REVISED Attachment 8, September 2023).

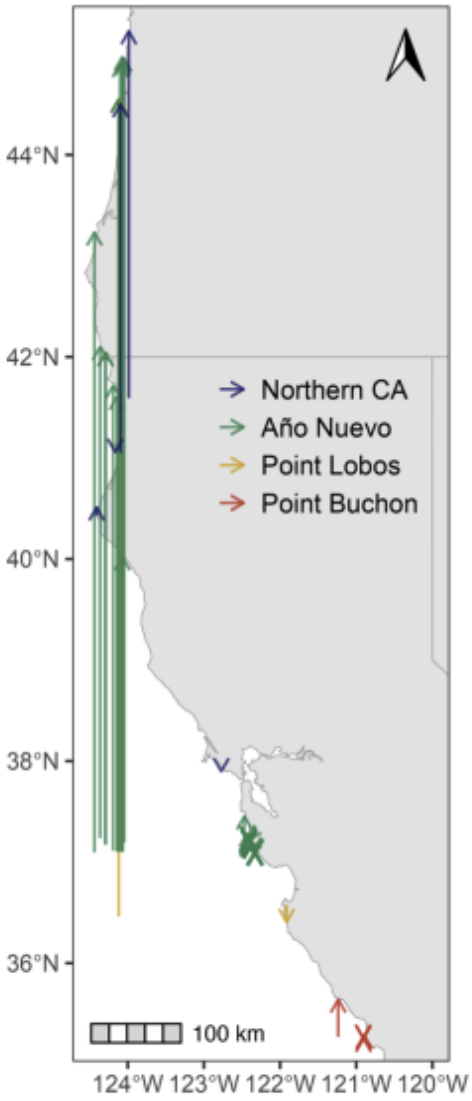

Figure 1: Map of recaptured black rockfish (n = 65) tagged as part of the California Collaborative Fisheries Research Program (CCFRP, 2007 to 2022). Colors represent different release locations and arrows denote recapture locations. Euclidean distances (km) were estimated for net movements (see text for further details). Arrows were jittered for visualization.

Figure 6. Copy of Figure 1 from the 2023 stock assessment of black rockfish off California showing movement of CCFRP tagged black rockfish.

New information about net movement rates illustrates the considerable uncertainty in spatial population structure for black rockfish. Specific boundaries for individual stocks, should they exist, are much more uncertain.

This uncertainty indicates that there may not be a biological break between the stocks of black rockfish off California and Oregon; they are likely connected. Therefore, the management actions and mortality from one state could have an impact on the biomass and subsequent fisheries off the

other state. This would indicate that the stocks should be treated the same in regard to their presence in the FMP.

Blue and deacon rockfish have not had the same discussion concerning uncertainty in the stock structure and movement. They are both semi-pelagic species often found in mixed schools with black rockfish. There is the further complication of the proportion of blue vs. deacon rockfish changes latitudinally with blue rockfish being the dominant species south of Monterey Bay, CA and an increasing fraction of deacon rockfish north into Oregon (Agenda Item E.8. Attachment 9, September 2017). The 2017 assessment stated, "stock structure and its relationship to the current political/management boundaries are also not fully understood". The research and data needs section of that assessment also stated that "ontogenetic and gender-related movement according to offshore depth and spawning seems plausible, and data to inform tests of that hypothesis would be beneficial for future assessments given the lack of larger/older males in the fisheries data. Given that the vast majority of catches for BDR are in the nearshore waters, the intersection of seasonal movements to offshore habitat coupled with fleet dynamics could play an important role determining vulnerability." An additional complicating factor is that California does not recognize deacon rockfish as a separate species from blue rockfish.

ODFW Fishery Monitoring and Management Programs

ODFW does the active sampling, estimations, monitoring, outreach and education, and management of the Oregon recreational groundfish fishery and the Oregon commercial nearshore fishery for all species encountered, as well as sampling and providing catch and biological data for federal commercial fisheries, such as the limited entry fixed gear fishery and trawl individual fishing quota fishery. Funding for all of this work is from a combination of federal funds (e.g. SFR, PacFIN, RecFIN) and state funds (e.g., recreational license sales, commercial fishing ad valorem fees).

ODFW's Ocean Recreational Boat Survey (Schindler et al, 2021) is the creel survey program that produces estimates of effort and catch from Oregon's ocean recreational fisheries. The estimates produced are used for inseason management, post-season total mortality estimates, pre-season modeling, and to inform stock assessments. The program has a goal of sampling at least 20 percent of returning vessels to meet salmon coded wire tag sampling goals, using a next up approach. When a sampler completes the interview and sample with a vessel, they then go to the next returning vessel to try to ensure a random representative sample for that port and day. Data is collected and estimates are calculated on effort and catches for all species whether contained in a federal FMP (e.g. Chinook salmon, lingcod, canary rockfish, albacore tuna) or not (e.g., Pacific halibut, buffalo sculpin).

ODFW also operates the Oregon Recreational Fishery Study (ORFS) program, an onboard charter fishing vessel observer program. ORFS samplers do ride-alongs collecting at-sea biological data on fish discarded at sea, the only source of this information. When not at sea, ORFS samplers collect age structures from recreationally caught fish, focusing on species in the Groundfish FMP. This is the only source of recreational fishing age structures from Oregon to inform federal groundfish stock assessments.

ODFW has commercial fishery port biologists in commercial fishing ports along the Oregon coast. The port biologists sample state and federal commercial fisheries, collecting market samples to

determine the proportions of species in an offload as well as biological samples such as weight, length, sex, maturity, and age structure collections. These data are used in determining catches by species for inseason tracking, total mortality estimates, and to inform federal stock assessments. The port biologists work closely with the commercial fishing fleet and processors and are a great source of information on what is happening, or has happened in the past in the fishery, that often fill in questions for management and assessments that may not be captured in the data. They also work to ensure that industry members have the most up to date information on seasons, quotas, and regulations for both state and federal fisheries.

In addition to its robust sampling programs, ODFW has staff involved in the management of state and federal, recreational and commercial fisheries, including inseason tracking, setting seasons and regulations, pre-season projections and modeling, and public outreach and education, as well as regulatory and policy processes such as the Oregon Fish and Wildlife Commission and regional fishery management councils. These staff are the conduits for information between fishery participants, fishery monitors, researchers, and policy makers. They are also involved in extensive public input processes, hosting a number of public meetings and advisory body meetings annually to get input on the current season as well as guidance for future seasons. The feedback received is then relayed to federal and state policy makers to aid in decision making.

Currently, ODFW does not have a dedicated marine species stock assessor and employs only one biometrician for the entire agency. While existing marine program staff have participated in stock assessment teams and review panels, the agency lacks the resources (staff and funding) to conduct full benchmark stock assessments in-house. As a result, ODFW would need to explore alternative metrics or methodologies to ensure the sustainability of fisheries in the absence of comprehensive benchmark assessments for key species, such as black rockfish, if removed from the FMP.

Delegation of Management Authority to States Under the MSA

Under future action, *separate from the current stock definitions process*, the Council could recommend delegation of management authority to some species to the states. This would functionally be very similar to how the recreational and Oregon commercial nearshore fisheries have been operating.

The Magnuson-Stevens Act (MSA) provides a mechanism for the delegation of federal fishery management authority to state agencies under certain conditions. This delegation allows states to manage aspects of fisheries that occur in federal waters (i.e., the EEZ, from 3 to 200 nautical miles offshore), typically when such management:

- Addresses species not currently included in a federal FMP,
- Meets specific localized needs that are best managed by the state,
- And is consistent with the broader goals and requirements of the MSA.

Process of Delegation

1. Regional Fishery Management Council Recommendation: The process begins when a Council (e.g., Gulf of Mexico, Pacific, etc.) recommends delegating specific management responsibilities to a state.
2. Review and Approval: NMFS, under the authority of the Secretary of Commerce, reviews the recommendation.

3. Federal Rulemaking: If approved, the delegation is formalized through federal regulations that outline the scope and terms of the authority granted to the state.

Functional Management Under Delegation

Under a delegation agreement:

- Federal Oversight Remains: Key components like stock assessments, scientific review, and setting of Annual Catch Limits (ACLs) are still conducted at the federal level.
- State-Level Implementation: States manage the operational rules (e.g., bag limits, trip limits, open/closed seasons) to ensure that harvest remains within federal ACLs.
- Monitoring and Reporting: States are typically expected to maintain existing fishery monitoring and sampling programs to support accountability and sustainability.

Appendix 1. The Ten Factors for the Ten-Factor Analysis

i. The stock is an important component of the marine environment.
ii. The stock is caught by the fishery.
iii. Whether an FMP can improve or maintain the condition of the stock.
iv. The stock is a target of a fishery.
v. The stock is important to commercial, recreational, or subsistence users.
vi. The fishery is important to the Nation or to the regional economy.
vii. The need to resolve competing interests and conflicts among user groups and whether an FMP can further that resolution.
viii. The economic condition of a fishery and whether an FMP can produce more efficient utilization.
ix. The needs of a developing fishery, and whether an FMP can foster orderly growth.
x. The extent to which the fishery is already adequately managed by states, by state/Federal programs, or by Federal regulations pursuant to other FMPs or international commissions, or by industry self-regulation, consistent with the requirements of the Magnuson-Stevens Act and other applicable law.

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