

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE REPORT ON FINAL PREFERRED MANAGEMENT ALTERNATIVES FOR 2023-2024

The California Department of Fish and Wildlife (CDFW) offers the following recommendations for Council consideration as final preferred alternative (FPA) management measures for the 2023-2024 biennium. Between the April and June Council meetings, CDFW met remotely with stakeholders on May 19, 2022, to discuss harvest specifications and management measure options and to solicit input to develop final alternatives for sport fisheries. The Management Measures presented in this report have all been analyzed within the draft Integrated Alternatives Analytical document ([Agenda Item F.4. Attachment 2, Pacific Coast Groundfish Fishery 2023-2024 Harvest Specifications and Management Measures, April 2022](#)). As stated in April 2022, CDFW anticipates the need for continued discussions with stakeholders beyond June, and that inseason actions during 2023 and 2024 may be appropriate to respond to newly-available fishery data in 2022 which reflect substantial regulatory changes and discard mortality rates, or unforeseen events as they arise in the new biennium.

New Management Measures

CDFW recommends as FPA inclusion of the new management measures as analyzed in the Integrated Alternatives Analysis for:

- Action Item 2– adopt proposed Rockfish Conservation Area (RCA) updated waypoints and modifications as found in [E.5.a, Supplemental CDFW Report 1, November 2021](#)
- Action Item 12e - Non-bottom Contact hook-and-line gear allowance in the non-trawl RCA
- Action Item 12h - Recreational bag limit changes for quillback rockfish, copper rockfish, and vermilion rockfish
- Action Item 12i - Novel utilization of existing RCA boundary lines

See the discussion below on rationale for recommendations on New Management Measures in the Commercial and Recreational fishery sections.

Cowcod Annual Catch Target (ACT) Limit South of 40° 10' N. Lat.

CDFW recommends as FPA the CDFW Preliminary Preferred Alternative (PPA) that removes the precautionary 50 mt ACT (Action Item 5), as described in [Agenda Item F.4.a Supplemental CDFW Report 1, April 2022](#).

Commercial Fishery

CDFW recommends as FPA the CDFW PPA for copper and quillback rockfish commercial sub-trip limits (Action Items 14a, 14b, 15a, and 15b) and non-bottom contact hook-and-line gear allowance in the non-trawl RCA (Action Item 12e) as described in [Agenda Item F.4.a Supplemental CDFW Report 1, April 2022](#).

Regarding maintaining minimal retention of copper rockfish and quillback rockfish in the 2023-24 biennium (i.e., 75 lbs. / 2 months sub-trip limit), CDFW notes that for nearly 20 years, a Deeper Nearshore Species Fishery permit has been required for the take, possession aboard a boat, or landing of black rockfish, blue rockfish, brown rockfish, calico rockfish, copper rockfish, olive

rockfish, quillback rockfish and treefish for commercial purposes as per [California Code of Regulations, Title 14 §150.02](#). Section 2.8.2 of [Agenda Item F.4., Attachment 2, April 2022](#) indicated in 2021 there were 181 Deeper Nearshore Species Fishery permits registered, of which 120 were active (i.e., a permit holder made at least 1 landing of deeper nearshore rockfish), however, these numbers were in error. In 2021 there were actually 176 permits registered, of which 107 were active. Additionally, many of these active Deeper Nearshore Species Fishery participants do not fish year-round and/or solely in the nearshore fishery. A review of landing receipts along with discussions with industry indicate that Deeper Nearshore Fishery permittees also participate in other sectors of the groundfish fishery (e.g., LEFG non-nearshore) and non-groundfish fisheries (e.g., Dungeness crab, salmon, and CA lobster) to round-out their portfolios.

Furthermore, participants in the restricted access Deeper Nearshore Species Fishery are also subject to [California Code of Regulations, Title 14 § 150.16.\(e\)\(5\)](#) which states,

“Cumulative trip limit values noticed in the Federal Register by the National Marine Fisheries Service for the cumulative trip limit periods for shallow nearshore rockfish, deeper nearshore rockfish, and California scorpionfish apply to each individual California commercial licensee in addition to the federally-defined vessel-based limits. Landings are summed by an individual's California commercial license number listed on fish receipts submitted to the department pursuant to [Section 8043, Fish and Game Code](#).”

For these reasons, a well-established restricted access permitted fishery, a state regulation that further restricts the landings of copper rockfish and quillback rockfish, along with the list of contributing factors described in Section 2.8.2 of [Agenda Item F.4., Attachment 2, April 2022](#) should significantly and effectively limit commercial harvest of copper rockfish and quillback rockfish. CDFW continues to recommend maintaining the 2022 sub-trip limits for 2023 and 2024, noting the ability to adjust these limits inseason based on the most recent data and projections.

With respect to RCA updated waypoints and modifications as found in [E.5.a, Supplemental CDFW Report 1, November 2021](#), CDFW recommends that the council adopt the RCA corrections adopted as the PPA be adopted as FPA. The proposed modifications fall into at least one of the following categories: establish new NT-RCAs around the islands, banks and high spots within the CCA and address CDFW enforcement requests and industry requests to better align coordinates with the depth contour, as well as correct crossovers.

With respect to non-bottom contact hook-and-line gear allowance in the non-trawl RCA, CDFW continues to recommend this action as it is expected to achieve two different objectives. First, it will provide new opportunity to access underutilized and healthy mid-water rockfishes by the commercial non-trawl sector. Second, it is expected to result in some effort shift of activity from nearshore waters into the deeper waters of the non-trawl RCA. CDFW also wishes to acknowledge that access to healthy stocks in the non-trawl RCA was identified as a prioritized action the Council recommended to the Department of Commerce to “reduce burdens on domestic fishing and to increase production of sustainable fisheries” to meet Section 4 of Executive Order 13921,

Promoting American Seafood Competitiveness and Economic Growth ([Agenda Item H.2., Attachment 2, April 2021](#)).

Recreational Fishery

Model and Catch Projection Uncertainty

The anticipated mortality of select groundfish species in the California recreational fishery under various season structure options is projected using the RecFISH model. The model was developed in 2004, with subsequent augmentation of monthly catch by depth and time parameters. RecFISH allows projection of catch by depth and season length independently, in each of the five California groundfish management areas. The RecFISH model is a catch-based model as opposed to an effort-based model and has been previously reviewed by the Scientific and Statistical Committee (SSC).

While the RecFISH model is the best available science, there are multiple known uncertainties and deficiencies which are explained here. For some species, few data are available to inform the model, which is particularly the case for species with deeper depth distributions, such as the shelf and slope rockfish species, or species for which retention is prohibited or encounters are infrequent. For these species and depth bins, projected impacts may vary substantially from actual impacts. Recreational fishing regulations off California have allowed virtually no recreational fishing activity in offshore waters for more than 20 years, which means there is virtually no data to inform the model for these depth bins.

The model assumes that the management measures, fishing behavior, and ocean conditions during the historic period will be representative of the current fishery. It also assumes the management measures, fishing behavior, and ocean conditions during the historic period and current fishery will be representative of those into the future. If significant changes to management measures are made to the fishery, or if large shifts in angler behavior or ocean conditions occur, substantial changes to actual fishery impacts may result, which the model cannot predict.

The historic catch data informing the model for 2023-24 are from 2017-2019, and January-October 2021. Data from more distant years is not likely to be useful to inform projections, given the number of changes to management over time. In 2017-2019 and 2021, the bag limit for copper and quillback rockfish was 10 fish within the 10-fish Rockfish, Cabezon and Greenling (RCG) daily bag and possession limit. In November 2021, the Council recommended and NMFS approved reductions to bag limits for quillback and copper rockfishes from 10-fish to 1-fish within the RCG daily bag and possession limit, effective January 1, 2022. Additionally, the vermilion rockfish sub-bag limit was reduced from 5-fish to 4-fish in response to continued high catches. The projections of total mortality produced in November 2021 are likely overestimates of total mortality, however no new catch information has become available since that time to update projected mortality. As the 2022 fisheries progress, new information will become available. Unfortunately, this information will not be available in time to inform the recommendations that must be made at the June Council meeting on the season structure and management measures for 2023-24. The greatest sources of model projection uncertainty include:

- The reductions in 2022 from a 10-fish to a 1-fish bag in the RCG complex for quillback and copper rockfish are not something the model predicts well. Copper rockfish was a target species during the time period used in the projection model, not a species to avoid. This change will impact angler behavior in ways the model cannot predict. Anecdotal information in 2022 also indicates Commercial Passenger Fishing Vessels (CPFVs) in many areas are actively avoiding areas with high copper rockfish encounter rates, which could further reduce total mortality and could result in pre-season catch projections that are too high.
- The model is inherently uncertain whenever significant changes to regulations are made. The management measures proposed by CDFW in this report are a radical departure from past and current management measures and introduce the greatest source of uncertainty to projecting impacts as fishing would occur in completely new areas that haven't been accessed by the recreational fishery in two decades.
- New descending device depth dependent mortality release rates are in development by the GMT and are expected to be available for use in management later in 2022. It is expected application of these new rates will change the discard mortality in CDFW's monthly California Recreational Fishery Survey (CRFS) estimates, and subsequently in the RecFISH model catch projections.

Inseason Tracking and Monitoring

For the reasons discussed above, CDFW believes the catch projections provided are highly uncertain, and for quillback and copper rockfish are expected to be over-projections. CDFW tracks groundfish mortality inseason on a weekly and/or monthly basis to ensure that mortality remains within allowable limits. Several rockfish species of concern (yelloweye rockfish, black rockfish, and previously cowcod and canary rockfish) are tracked on a weekly basis using CRFS field reports. Beginning in 2022, the list of species was expanded to include quillback and copper rockfish as a result of new stock status information.

Data on observed and released fish from the weekly CRFS reports are converted into an anticipated catch value (ACV) in metric tons using catch and effort data from previous years. Weekly ACV data are used as "proxy" values to approximate catch during the five-to-eight-week lag time between when data are collected and when CRFS catch estimates become available. ACVs have proven to be an effective and reliable tool to closely monitor recreational inseason mortality on a weekly basis. The Council might be most familiar with CDFW's ACV methodology because of its application to inseason Pacific halibut quota monitoring, but the approach originated out of the need to track overfished species attainment (yelloweye and cowcod) in California's recreational groundfish fisheries many years ago.

Although the boat-based recreational groundfish fisheries in California only opened statewide May 1, preliminary inseason data from the CRFS weekly reports covering January-May indicates total sampled or reported copper rockfish in 2022 are less than half the number from January-May in 2021, and about 25 percent the number from January-May in 2018 and 2019. This information suggests the new 1-fish sub-bag limit for copper rockfish is resulting in significant reductions to encountered fish, and it is expected that reductions to CRFS monthly catch estimates will be realized once they become available. Since it is still early in the fishing season, limited data are

currently available on quillback rockfish sampled in 2022, but the data that are available indicate a reduction in sampled or reported fish compared to prior years. For additional information on catch to date and analysis of the measures that took effect January 1, 2022, please see the CDFW report on inseason adjustments under Agenda Item F.7.

CDFW also performs monthly tracking of target species (i.e., vermilion, and canary rockfish) using CRFS estimates produced throughout the year. These species tend to be encountered at a much higher frequency than yelloweye rockfish and quillback rockfish- thousands of fish per week as opposed to tens of fish. The volume of data associated with these species makes it much more challenging to summarize and track on a more frequent basis than monthly, so CDFW prioritizes the use of ACV methodology to only those species that are constraining or need close monitoring to ensure catches stay within allowable limits, such as yelloweye and Pacific halibut. Monthly tracking has proven effective at keeping catches of the remaining species within allowable limits. Inseason tracking reports are provided by CDFW to the Council at each Council meeting. To date, CDFW's weekly and monthly tracking processes have been an effective and reliable tool to closely monitor recreational inseason mortality and serves to provide timely and accurate information to inform inseason management considerations.

Inseason Management Response

The CDFW-proposed FPAs within this document were developed to reduce total mortality of quillback rockfish and copper rockfish, in response to best scientific information newly available in 2021. Both quillback rockfish and copper rockfish continue to be managed within the Minor Nearshore Rockfish complexes both north and south of 40°10' N. lat., and species within complexes are managed to the Annual Catch Limit (ACL) for the complex. CDFW reminds the Council that the level of precision needed to manage fisheries with ACTs or harvest limits below 5-10 mt is extremely difficult, if not impossible to achieve, as random encounters in the fishery can lead to large expansions in even the best sampling surveys. While acknowledging the challenges with expansion and sampling design, CDFW believes that even an extremely low ACT or harvest guideline (HG) can serve as a meaningful reference point to inform inseason management decisions. If mortality of these species inseason reaches or is projected to exceed ACTs, or other harvest limits, CDFW will notify NMFS, the Council and agency fishery managers who may confer to consider the risk to the resource and the socioeconomics of the fishery to determine if inseason management action is warranted to slow or stop further mortality from occurring.

If warranted, CDFW anticipates stepwise adjustments to measures to try and curb impacts accordingly (i.e., changes to depth limits, season length, or bag limits). The scope and duration of the inseason management changes will be dependent upon which species triggered the action(s), the time of year, and the scale of projected harvest limit exceedance. The range of management alternatives analyzed in the draft Integrated Alternatives Analytical document covered a larger than normal range and will allow for a greater range of options available for use in inseason management responses. Sub-bag limits of 0-fish were analyzed for both quillback and copper rockfishes, and this option will be available for use in inseason management should it be necessary. The new management measure allowing for fishing seaward of a specified RCA boundary line and prohibiting fishing shoreward of that line will also be available for inseason management if necessary. Additionally, CDFW appreciates and recognizes the voluntary steps that recreational fishery anglers, organizations and CPFVs are currently taking to avoid areas of high copper

rockfish and quillback rockfish encounters and the utilization of descending devices with released fish to reduce mortality on these species. CDFW has broadened its angler outreach on descending devices and is committed to educating the public on their use along with distributing free descending devices to anglers provided to CDFW by the Pacific States Marine Fisheries Commission.

CDFW also reaffirms its commitment to keeping mortality of yelloweye rockfish, the only remaining rebuilding stock in the FMP, within the California recreational HG by using the inseason monitoring and reporting methods described above. Additionally, per [50 CFR 660.60\(c\)\(4\)](#), inseason action can be taken by NMFS outside of a Council meeting should the yelloweye harvest limit be attained or projected to be attained prior to the first day of the next Council meeting.

Recreational Fishery Season Structure FPA

All of the season structures depicted below are a substantial departure from the status quo, in that each management area will incur a significant reduction in fishing time in nearshore waters of 30 percent or more. The severe reductions are necessary to incorporate the best scientific information available from the 2021 stock assessments for quillback and copper rockfishes off California and the rebuilding analysis for quillback rockfish off California. The proposed reductions are intended to keep harvest levels proportional to the biomass off California consistent with the SSC recommendations of combining assessment areas for copper rockfish status determination. In lieu of multiple regional ACTs for each management area south of 40°10' N. lat., CDFW recommends using a single ACT in this area, combined with traditional management measures (season structures, depths, bag limits, etc.) that equitably distribute the limited fishing opportunity between sub-regions. These proposed season structures were crafted following multiple discussions with interested stakeholders between January and May 2022 and are refinements of Scenario 4 as presented in [Agenda Item F.4.a Supplemental CDFW Report 1, April 2022](#).

Under status quo, California's nearshore waters in each of the five Groundfish Management Areas are open between eight and ten months of the year. The proposed 2023-2024 season structures all reduce nearshore fishing opportunities that span from five to five and a half months, depending on the area. CDFW notes that for southern California, the reduction in nearshore fishing time is the most severe – from ten months down to five and a half months.

CDFW worked with stakeholders over winter to examine possible alternatives to mitigate for losses in nearshore fishery opportunities that are necessary to reduce catch and bycatch of these two nearshore rockfish species, such as an offshore fishery (a fishery that operates only seaward of a specified RCA boundary line) as described in [Agenda Item E.9.a Supplemental CDFW Report 1, March 2022](#) and [Agenda Item F.4.a Supplemental CDFW Report 1, April 2022](#).

Projected impacts (mt) were calculated using the established RecFISH catch projection model and are highly uncertain, except for vermilion rockfish (Table 5). Vermilion rockfish is not one of the species included in the RecFISH model. Instead, CDFW updated the inseason analysis conducted in November 2021 ([Agenda Item E.7.a Supplemental CDFW Report 2, November 2021](#)) with full-year 2021 data and projected fishery performance in 2022 to develop recreational catch projections for 2023-24. Projections include impacts for quillback and copper rockfish under the status quo 1-fish sub-bag limits and for vermilion rockfish status quo 4-fish sub-bag limit as described in the

Bag Limits section of this document. See Model and Catch Projection Uncertainty section of this document and in [Agenda Item F.4.a Supplemental CDFW Report 1, April 2022](#) for additional information.

CDFW proposes the following recreational groundfish fishery season structures by Management Area for the 2023-24 biennium as an FPA:

In the Northern Management Area (42° N. lat. to 40°10' N. lat.), the fishery for the Rockfish, Cabezon, and Greenling (RCG) complex and lingcod is closed Jan 1-May 14 and Oct 16-Dec 31 and is open in all depths May 15-October 15 (Table 1).

In the Mendocino Management Area (40°10' N. lat. to 38°57.5' N. lat.), and the San Francisco Management Area (38°57.5' N. lat. to 37°11' N. lat.) the fishery is closed Jan 1-May 14, open May 15-July 15 seaward of the 50 fm RCA line, and open in all depths from July 16-Dec 31 (Table 2).

In the Central Management Area (37°11' N. lat. to 34°27' N. lat.) the fishery is closed Jan 1-Apr 30, open May 1-Sept 30 in all depths, and open Oct 1-Dec 31 seaward of the 50 fm RCA line (Table 3).

In the Southern Management Area (34°27' N. lat. to US/Mex border) the fishery is closed Jan 1-Mar 31, open April 1-Sept 15 in all depths, and open Sept 16-Dec 31 seaward of the 50 fm RCA line (Table 4).

In all Management Areas, California scorpionfish, sanddabs, “other flatfish”¹, petrale sole, starry flounder, leopard shark, and “other groundfish” (which is defined in California Code of Regulations, Title 14, §28.49 as including soupfin shark, Dover sole, English sole, arrowtooth flounder, spiny dogfish, skates, ratfish, grenadiers, finescale codling, Pacific cod, Pacific whiting, sablefish and thornyheads), are open year-round at all depths.

In all Management Areas, during months that an “offshore-only” fishery is active in that management area, possession or retention of nearshore rockfish (defined as black rockfish, blue rockfish, black and yellow rockfish, brown rockfish, China rockfish, copper rockfish, calico rockfish, gopher rockfish, kelp rockfish, grass rockfish, olive rockfish, quillback rockfish, and treefish), cabezon, and greenlings is prohibited in all depths throughout that area. During an “offshore-only” fishery, fishing for, take and possession of shelf and slope rockfish and lingcod is only authorized in waters seaward of an RCA boundary line, as defined by connecting the series of waypoints. During times that an offshore-only fishery operates, vessels may transit through waters shoreward of the RCA line with no fishing gear in the water with the aforementioned species aboard. This means anglers who are targeting species such as bass, barracuda, California halibut, yellowtail, California scorpionfish, and California sheephead, in the areas shoreward of the RCA cannot have aboard any rockfish, cabezon, greenlings or lingcod during times when an offshore fishery operates.

¹ "Other flatfish" are described in California Code of Regulations (CCR) Title 14, §1.91(a)(10) including only butter sole, curlfin sole, flathead sole, Pacific sanddab, rex sole, rock sole, and sand sole.

Anglers are advised to plan their trips accordingly, especially when fishing for multiple target species during an “offshore only” fishery. Compliance with these retention requirements necessitates advance planning when fishing for groundfish and transiting through closed areas back to port.

Ocean whitefish and California sheephead are two state-managed species for which regulations, especially in the recreational fishery, have been coupled to those of federal groundfish to help minimize encounters with overfished shelf rockfish species. Currently, yelloweye rockfish is the only rebuilding groundfish species off California, and there is no longer a need to couple the recreational regulations for ocean whitefish and California sheephead to those for federal groundfish. Proposed modifications to state regulations (California Code of Regulations, Title 14) would allow recreational take of ocean whitefish year-round in all depths; no changes to the current 10-fish daily bag limit are proposed. As proposed, the recreational California sheephead fishery would be closed Jan 1-the last day of Feb, and open Mar 1-Dec 31 at all depths, and the daily bag limit would be reduced from 5-fish to 2-fish to keep catches within a state defined Total Allowable Catch limit and sector allocation.

Table 1. Season structure in the Northern Management Area for 2023-24 under the CDFW FPA. Proposed season structures for the groundfish associated state-managed California sheephead and ocean whitefish are included for reference.

Species	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
RCG and lingcod	Closed				Open All Depths					Closed		
California scorpionfish						Open All Depths						
Leopard shark						Open All Depths						
Other federal groundfish						Open All Depths						
Pacific sanddab and “other flatfish”						Open All Depths						
Petrale sole and starry flounder						Open All Depths						
California sheephead	Closed		Open All Depths									
Ocean whitefish	Open All Depths											

Table 2. Season structure in the Mendocino and San Francisco Management Areas for 2023-24 under the CDFW FPA. Proposed season structures for the groundfish associated state-managed California sheephead and ocean whitefish are included for reference.

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nearshore rockfish, cabezon and greenlings	Closed						Open All Depths					
Shelf and slope rockfish, lingcod	Closed				>50 fm		Open All Depths					
California scorpionfish						Open All Depths						
Leopard shark						Open All Depths						
Other federal groundfish						Open All Depths						
Pacific sanddab and “other flatfish”						Open All Depths						
Petrale Sole and starry Flounder						Open All Depths						
California sheephead	Closed		Open All Depths									
Ocean whitefish	Open All Depths											

Table 3. Final preferred season structure in the Central Management Area for 2023-24 under the CDFW FPA. Proposed season structures for the groundfish associated state-managed California sheephead and ocean whitefish are included for reference.

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nearshore rockfish, cabezon and greenlings	Closed			Open All Depths						Closed		
Shelf and slope rockfish, lingcod	Closed			Open All Depths						>50 fm		
California scorpionfish	Open All Depths											
Leopard shark	Open All Depths											
Other federal groundfish	Open All Depths											
Pacific sanddab and “other flatfish”	Open All Depths											
Petrale Sole and starry Flounder	Open All Depths											
California sheephead	Closed		Open All Depths									
Ocean whitefish	Open All Depths											

Table 4. Final preferred season structure in the Southern Management Area for 2023-24 under the CDFW FPA. Proposed season structures for the groundfish associated state-managed California sheephead and ocean whitefish are included for reference.

Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nearshore rockfish, cabezon and greenlings	Closed			Open All Depths						Closed		
Shelf and slope rockfish, lingcod	Closed			Open All Depths						>50 fm		
California scorpionfish	Open All Depths											
Leopard shark	Open All Depths											
Other federal groundfish	Open All Depths											
Pacific sanddab and “other flatfish”	Open All Depths											
Petrale Sole and starry Flounder	Open All Depths											
California sheephead	Closed		Open All Depths									
Ocean whitefish	Open All Depths											

Table 5. Projected recreational impacts (mt) of select groundfish off California for 2023-24 under the CDFW FPA. Data are from CDFW, are preliminary and subject to change.

Species	Projected Impact (mt)
Yelloweye rockfish	12.8
Quillback rockfish	
N 40°10 ' N. lat.	2.6
S 40°10 ' N. lat.	2.7
Copper rockfish	
N 40°10 ' N. lat.	3.6
S 40°10 ' N. lat.	119.4
Cowcod (S 40°10 ' N lat.)	7.3
Canary rockfish	106.9
Vermilion rockfish (S 40°10 ' N. lat.)	200

Sub-Bag Limits

Quillback rockfish – CDFW recommends a sub-bag limit of 1-fish (status quo) for quillback rockfish within the 10-fish RCG daily bag and possession limit as the FPA.

Copper rockfish – CDFW recommends a sub-bag limit of 1-fish (status quo) for copper rockfish within the 10-fish RCG daily bag and possession limit as the FPA.

Vermilion rockfish – CDFW supports an FPA that is the status quo vermilion rockfish sub-bag limit of 4-fish within the 10-fish RCG daily bag and possession limit.

As described earlier in this document, there is a high degree of uncertainty in the projected impacts as the modeling likely over projected the estimated discard mortality, as described in the Model and Catch Projection Uncertainty section earlier in this document. CDFW sees merit in the continuation of the 1-fish sub-bag limits for quillback and copper rockfish to allow for fishery-dependent data collection, specifically biological data. It is extremely important for future stock assessments to maintain the flow of data as data gaps would add to greater uncertainty in the results of future assessments. Therefore, maintaining status quo sub-bag limits is advisable until data become available to better inform managers of the effects of the changes that became effective January 2022 (See Inseason Management Response section).

CDFW expects the vermilion rockfish status quo bag limit, changes to season structure as described above, and inseason catch tracking and monitoring will provide the necessary management tools to keep vermilion rockfish mortality from exceeding the species-specific ACL or Overfishing Limit contribution to the minor shelf rockfish complex.