

DRAFT NMFS PLAN FOR ADDITIONAL SUMMER 2021 ASSESSMENT  
ACTIVITY RELATING TO COUNCIL REQUESTS CONCERNING  
THE DOGFISH AND DATA-MODERATE ASSESSMENTS

## **CDFW Requests**

The Science Centers, and the Northwest Fisheries Science Center (NWFS) in particular, are committed to helping assemble all readily-available information pertinent to evaluating an acceptable scope for assessing stock status for copper and quillback rockfishes in time for review of this question at the August Scientific and Statistical Committee Groundfish Subcommittee SSC-GFSC meeting.

With regard to the specifics of the CDFW motion, we would note that Request 2.a “The sensitivity analyses for all stocks requested in G.5 CDFW Supplemental Report 1”, involves a range of additional model inclusions for each species that effectively represent new full assessments including all possible data, not just a limited set of sensitivities tiering off of the current base models. That level of additional work cannot be completed before the fall, particularly since 2 of the 3 data-moderate STAT members are engaged in July assessment reviews.

## **Copper Rockfish, S. of Pt. Conception**

### **Indices**

All groundfish CPUE indices previously developed using data from California recreational fisheries have been created by Southwest Fisheries Science Center (SWFSC) staff. Those individuals are fully subscribed with the vermilion assessment through the September Council meeting. The data-moderate stock assessment team (D-M STAT) is willing to explore the impact of including existing recreational catch-per-unit-effort (CPUE) indices, that were developed for the 2013 copper assessment, in the current base model for the South of Point Conception area [Southern California Observer Indices (1999-2011); RecFIN/MRFSS (dockside sampling) 1980 to 2003]. We note that the existing structure of the South of Point Conception model has a single recreational fleet and the recreational fishery was previously split into commercial passenger fishing vessel (CPFV) and private components. We will not have time to change the current base model to align with those time series, although including them in the model in an *ad hoc* manner may still provide insight as to the impact they would have in a full assessment.

### **Other data**

Length data from CPFV sampling during 1975-79 and 1986-89 can be added to earlier data already in the model that was collected as part of the MRFSS program. CDFW should provide these data directly to Dr. Chantel Wetzel as soon as possible. These data should be provided in a form that would facilitate quick usage (e.g., already QA/QC'd, data only for copper rockfish) with clear documentation.

Initial age reading of otoliths collected by the H&L Survey was focused on filling out a range of samples for purposes of estimating growth outside of the assessment model, in combination with samples collected by the trawl survey. If we can conduct sufficient additional ageing to create an effectively-random sample of H&L Survey ages, those could also be included along with the index and survey lengths (or potentially the existing set could be included as conditional ages at length).

As part of 2.c, the CDFW motion includes, “For Copper, consider if including additional catch indices are appropriate to better inform catch (CDFW Supp 2).” If this request is referring to the time series which show the copper proportions of minor nearshore rockfish, we would note that these do not represent indices of abundance which could be directly included in the assessment model, and that understanding the significance of those proportions would require, at minimum, concurrent consideration/evaluation of: 1) nearshore management specifics including restrictions on shallow and deeper nearshore species landings and RCA boundaries; 2) depth-distribution profiles for each of the nearshore species, 3) time series of ex-vessel prices for live and dead fish, and landed amounts partitioned into those categories, and 4) information regarding associations between individual deeper-nearshore and shelf species for which targeting may also have changed over the last 20 years.

### **Copper Rockfish, CA - N. of Pt. Conception**

The MRFSS-based index used previously covered a range from Point Conception to Astoria, OR, and cannot be directly incorporated into the current northern CA model. Previously-developed CPFV indices for copper north of Pt. Conception include observations only as far north as Cape Mendocino, and are therefore mismatched both spatially as well as in terms of fleet separation with the current N. CA model. Time-permitting, there would be an opportunity to include sampled lengths that are not included in the current base model [CDFW Central California Onboard CPFV Sampling Data 1987-1998]. CDFW should provide these data directly to Dr. Chantel Wetzel as soon as possible. These data should be provided in a form that would facilitate quick usage (e.g., already QA/QC'd, data only for copper rockfish) with clear documentation.

### **Quillback Rockfish, CA**

The current base model did not include 753 lengths [CDFW Central California Onboard CPFV Sampling Data 1987-1998] that can be added. CDFW should provide these data directly to Dr. Brian Langseth as soon as possible. This data-set should be provided in a form that would facilitate quick usage (e.g., QAQC, data for quillback rockfish only) with clear documentation.

We have been advised by SWFSC scientists that there is insufficient data to develop a CPFV index in CA. There may or may not be sufficient data to construct a private vessel/dockside index, but one does not already exist. It might also be noted that since these data include little-to-no data with which to reliably estimate fishing effort on a per-trip basis, they are historically less reliable than sources such as the CPFV fleet, where observers record measures of effort for each period of fishing.

One of the most significant data gaps in this model was the lack of ages to inform growth of fish in this area. Sufficient collection of structures and ageing to accomplish that are not likely to be forthcoming this summer. However, if additional structures could be collected by CDFW by Sept.-Oct. and aged promptly, they could potentially be compared with the shared values from OR used in the current model. The collection of otoliths for ageing, whether conducted this year or in the future, should ensure that sampling reflects the entire size distribution for quillback rockfish.

The motion notes the presence of “errors in point estimates of annual catch” in the CA area. CDFW is responsible for resolving errors in their recreational or commercial catch data. The STAT used the data that were available from the recommended sources (RecFIN and PacFIN), and values that are noted as errors by CDFW were included in the data presentation for quillback at the October 2020 Pre-assessment Workshop. These workshops are held in order to draw attention and scrutiny to the data and modeling

assumptions/structure that are being considered for use in upcoming assessments. If CDFW is able to provide corrected removals for each year and fishery, these values can be explored in the model. We note that the California Quillback assessment includes a sensitivity run in which the high catch amounts for the commercial fishery in 1991 and recreational fishery in 1983 and 1993 were set to the average of the preceding and following 3 years. This alternative resulted in a lower stock status (12% vs 14% of unfished) and lower Total Yield at SPR50 from 8.41 mt to 6.02 mt, a reduction of 28%.

### **Squarespot Rockfish, CA**

We have been advised by SWFSC scientists that there is insufficient data to develop a CPFV index in CA. We are unaware of any additional information that could be easily added this summer to the current base model. Other than the inclusion of historical CPFV length data and the possibility that a dockside index might be possible, we are unaware of any currently available, additional data that could be included in a future full assessment. CDFW should provide these data directly to Dr. Jason Cope as soon as possible. These data should be provided in a form that would facilitate quick usage (e.g., already QA/QC'd, data for squarespot rockfish only) with clear documentation.

### **Dogfish motion**

The NWFSC will review observer data, particularly from mid-water fisheries off the north coast, to document seasonal patterns in dogfish bycatch rates and compare those with the timing of sampling in that area by the NWFSC bottom trawl survey. We will also investigate whether there are any persistent differences in trawl survey encounter rates of dogfish between Pass 1 (late-May/early-June) and Pass 2 (late-August), though considerable seasonal northward movement of dogfish may already have occurred by the time of Pass 1.

### **Other**

Considerable mention has been made of a new CDFW analysis of the “Percent of Habitat Area Closed to Fishing for Groundfish in the RCAs, CCAs and MPAs in California from 2001-2021,” which is summarized in Appendix 1 of Agenda Item G.5.a, Supplemental CDFW Report 1 (June 2021), “CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE REPORT ON 2021 GROUND FISH STOCK ASSESSMENTS.” Since the results of this analysis are being cited to the Council as offsetting/mitigating factors in evaluating the depletion findings of the current data-moderate assessments, we believe it would be prudent for the Council to instruct the SSC to review the details of the analysis and conclusions, and provide the Council with guidance on the implications relative to stock assessment findings.