

Reef Fish Committee Report April 13 – 14, 2021 Ms. Martha Guyas – Chair

The Committee adopted the agenda (**Tab B, No. 1**) after adding an item about the historical captain's permit under Other Business. The minutes (**Tab B, No. 2**) from the January 2021 meeting were approved as written.

Status of NOAA Fisheries' MRIP 2020 Recreational Fisheries Catch Estimation Process (Tab B, No. 4)

Dr. Richard Cody from the National Oceanic and Atmospheric Administration's (NOAA) Office of Science and Technology (OST) presented the status of NOAA's evaluation of recreational catch and effort for the 2020 fishing year in the wake of COVID-19, as collected through its Marine Recreational Information Program (MRIP). It is important to note that these data only apply to Florida, Alabama, and Mississippi for the years of data presented (2018 – 2020), since Louisiana and Texas do not report recreational catch and effort data through MRIP. MRIP's Access Point Angler Intercept Survey (APAIS) was suspended in the Gulf of Mexico (Gulf) during Wave 2 (March/April) of 2020; headboat sampling remains suspended. These APAIS data gaps vary by state, but are known; imputation using 2018 and 2019 data for commensurate time periods will be down-weighted by a factor of 2, and imputed for these gaps. The 2020 2-month data collection waves will then be available, using these imputed data. Other methods were considered to inform 2020 catch estimates; however, MRIP's consultants thought the aforementioned approach to be the best option. NOAA OST will revisit the 2020 catch estimates when complete APAIS data are available for 2021, and will evaluate the imputations to 2020 estimates using records from 2019 and 2021 versus 2018 and 2019. MRIP's Fishing Effort Survey (FES) continued relatively unimpeded during 2020, with little difference in the Gulf in estimates when imputing missing data at the annual level. Though not significantly different, private angling effort in 2020 is estimated to be similar to 2018 and higher than in 2019 for the Gulf. Charter for-hire effort for 2020 was higher than in 2018, but slightly less than in 2019. NOAA OST has completed an initial review of 2020 recreational catch and effort data, following up on a limited number of cases. MRIP's Internal Review Team (IRT; composed of NMFS regional office and science center staff) has finished its review of the 2020 estimates, and OST will investigate any estimates flagged by the IRT. MRIP intends to release estimates from the 2020 fishing year by mid-April 2021.

Committee members asked about the comparison of MRIP APAIS intercept rates for 2020 against the mean for 2017 – 2019, which showed the ratio of the two values across months for each state. Dr. Cody replied that beginning mid-May of 2020, most of the MRIP APAIS assignments were completed for Gulf states; however, gaps in sampling still exist for the three Gulf states, necessitating data imputation for these gaps in 2020 with auxiliary information. A Committee member questioned using MRIP-synthesized data for imputing missing 2020 catch and effort data, as opposed to using the Gulf state data collection programs, especially for red snapper. Dr. Cody replied that Alabama and Mississippi state surveys focus mostly on red

snapper, and operate in a different way compared to MRIP's APAIS. He added that MRIP has been peer-reviewed and certified as the best scientific information available, and that NOAA OST continues to assist the Gulf states with the development and refinement of their respective surveys. The Committee asked about MRIP's compatibility with monitoring recreational catch and effort at finer scales than the two-month reporting waves. Dr. Cody noted the review of MRIP's appropriateness for in-season monitoring by the National Academies of Science would be available in July 2021. A Committee member asked about MRIP's appropriateness at small spatial scales. Dr. Cody replied that the MRIP transition team would begin looking at these issues in the near future, and would work with states with smaller coastlines to work on resolving some of these issues.

Review of Reef Fish Landings, and IFQ Program Landings (Tab B, No. 5)

Mr. Peter Hood from the Southeast Regional Office (SERO) provided an update to Gulf reef fish commercial landings, including species managed under individual fishing quota (IFQ) programs. All 2020 and 2021 fishing year landings are considered preliminary. Gray triggerfish and greater amberjack commercial landings for 2020 were below the 2018 – 2020 average and fishing remained open through 2020. Gray snapper, mutton snapper, and vermilion snapper, all managed under stock annual catch limits (ACLs) without sector allocations, remained open during the 2020 fishing year, with landings below the 2018 – 2020 average. For IFQ species, red snapper, gag, and red grouper landings all remained below their commercial ACLs, with red snapper commercial landings most closely matching the landings trend observed for 2018 – 2020. Both gag and red grouper commercial landings followed the trend from 2018 – 2020; however, commercial landings for both species were below their respective commercial ACLs for 2020.

Review of the Great Red Snapper Count Project (Tab B, No. 6)

Dr. Kai Lorenzen from the Council's Scientific and Statistical Committee presented the peer-review of the Great Red Snapper Count (GRSC), which took place from March 30 – April 1, 2021, between the co-principal investigators (PIs) of the GRSC, the non-PI members of the SSC, and three independent reviewers.

In addressing the terms of reference, Dr. Lorenzen reviewed the comments from the independent consultants. Overall, the GRSC design covered a large area of the Gulf appropriately; however, implementation of sampling methods sometimes differed from the design. The reasons and implications for possible bias and variance related to these deviations were not always clear. The use of different technologies in different strata was unavoidable, but the paucity of intercalibration studies may affect cross comparisons of data, and the combination of data from different strata to generate abundance estimates. The reviewers also noted limited comparability of calibration studies off Florida may indicate that the true observation error is likely much larger than the 11% total coefficient of variance (CV) derived from the stratified estimate. Also, the independent consultants identified the lack of data collection in some strata, such as for Louisiana, and the consequent need to infer mean densities in those strata as a source of

underrepresented uncertainty. Overall, the two independent analyses used in the GRSC were thought to be partially correct, with some issues arising from non-random (cluster) sampling and a lack of clarity about post-stratification decisions that resulted from differences between sample design and actual sampling activity. Estimated variances were thought to be low due additional sources of variability not currently included in the variance estimation; while some of these can be estimated and included, others cannot. The independent consultants stated that results of the GRSC, if corrected for noted statistical issues, can be useful at least in a regional context. Reviewers did not think it appropriate to combine eastern and western Gulf estimates of absolute abundance into a single value, due to differences in survey technologies used, and a lack of calibration between regions. The eastern Gulf estimate, with a more credible variance, can be included as abundance estimate in a future stock assessment; however, the western Gulf estimate may be more appropriately considered as a lower bound constraint for abundance in the western Gulf (i.e., Louisiana and Texas). The review team expressed confidence in the abundance estimate for the uncharacterized bottom (UCB), noting that the densities over the UCB are lower than in other habitats; in hindsight, the GRSC team thought the UCB was comparatively under-sampled. The assumptions made therein appeared appropriate and not likely to induce bias, except in the variance estimates. The independent consultants said that the stock-wide estimate may be an underestimate.

Dr. Lorenzen stated the review team's motion to consider the GRSC as a representative estimate of abundance for the eastern Gulf, and a highly uncertain estimate for the Western Gulf. However, the review team also considered the true uncertainty in both estimates to be substantially larger than implied by the 11% CV stated in the GRSC report, and that the estimate for the UCB is particularly uncertain. Dr. Lorenzen added that all stock assessments are uncertain to some degree and often underestimate their true uncertainty. Both the SEDAR 52 (2018) stock assessment and the GRSC estimate of absolute abundance are estimates derived from sampling and use statistical models to generate point estimates. Integrating data from both (SEDAR 52 and the GRSC) should help to reduce uncertainty and possible bias, improve management advice, and help identify new options for sampling methods and analyses. In addition to the absolute abundance estimate, Dr. Lorenzen noted that the review team thought the GRSC provides novel information on many aspects of red snapper ecology and fisheries.

A Committee member noted that the independent consultants did not seem to be opposed to the point estimate of abundance, but rather expressed concern about the biases in the estimate and the underestimation of variance. The Committee discussed the differences in the number of sampling sites included in the GRSC versus the NMFS Bottom Longline Survey (BLL). Dr. Clay Porch (Southeast Fisheries Science Center; SEFSC) noted that the GRSC is a snapshot of compared to the long time series of data represented by the NMFS BLL. Dr. Porch added that he thought the SSC viewed the NMFS BLL as representative of trends in red snapper abundance, considerate also of the fact that the NMFS BLL samples the same areas as those classified as UCB in the GRSC. He caveated that NMFS BLL data for 2020 did not have the same sample coverage as previous years due to COVID-19. Also, because of the differences in the methods used by the GRSC and the NMFS BLL, the surveys are not directly comparable; the GRSC was designed to generate an estimate of absolute abundance, while the NMFS BLL is used to generate an index of relative abundance. The latter is used to examine trends in abundance over time, while the former is used to determine the standing biomass at a given point in time.

A Committee member asked about the differences in the process of the peer-review of the GRSC compared to the process typical of a SEDAR assessment. Dr. Lorenzen replied that the review of these data and methods normally occurs through several workshops over an extended period of time, allowing for some outstanding issues with considered datasets to be resolved prior to their inclusion in the stock assessment model. The process for reviewing the GRSC was considerably shorter, with the expectation of using the results of the GRSC for reviewing catch advice immediately after the peer-review. Dr. Greg Stunz (lead PI) added that the final report for the GRSC wasn't due to the funding agency until June 2021, and that the research results from the GRSC would continue to be submitted for scientific publication in the future.

Dr. Stunz questioned a comment made by Dr. Lorenzen in a different context about managing expectations of large fisheries research studies. Dr. Stunz thought that working to manage expectations around the results of science was out of bounds for the true practice of science. Dr. Lorenzen replied that he meant that these projects should consider early on how the data collected and results generated may be used, and that the research projects should not establish any expectations of results prior to the studies being completed. Another Committee member agreed in that the SSC should operate in the absence of political pressures.

Dr. Tom Frazer addressed the resignation of Dr. Joe Powers, formerly the Chair of the SSC, after the SSC's March/April 2021 meeting. Dr. Frazer confirmed Dr. Powers' decision to resign. Further, after reviewing the audio transcript, Dr. Frazer clarified a misinterpreted comment by Dr. Powers during the SSC meeting, which some Committee members had interpreted as "...I haven't read the report..." as in fact being "...in having read the report...". The verbatim minutes were subsequently correct based and made available in the updated briefing materials on the Council website.

A Committee member asked about the size frequencies by region of red snapper in the Gulf observed by the GRSC. Dr. Stunz replied that the length composition information collected by the GRSC indicates that fish over the UCB are generally larger than those found over natural and artificial reefs. The GRSC team noted, in its report, that additional work needed to be completed to evaluate the length composition of red snapper over UCB. The Committee member asked about differences between length composition in the eastern and western Gulf. Dr. Stunz replied that fish in the western Gulf were larger than in the eastern Gulf, and that recolonization of reefs in the eastern Gulf by red snapper was primarily by smaller, younger fish.

Final Action: Framework Action: Modification of Annual Catch Limits for Gulf of Mexico Red Snapper (Tab B, No. 7)

Dr. Lorenzen described the circumstances surrounding the SSC's recommendation for catch advice based on interim analyses incorporating results of the GRSC or the NMFS BLL. These two data sources offer unique insights about red snapper; however, while the novel approaches used in the GRSC generated an estimate of absolute abundance, the NMFS BLL index provides a long-term trend in relative abundance which can be used to derive management advice.

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Dr. Lorenzen reviewed the SEFSC's interim catch analysis using the GRSC. The SEFSC noted that the SEDAR 52 estimates of relative abundance correspond to the GRSC estimates of absolute abundance on structure; whereas, abundance on the uncharacterized bottom (UCB) represents 'cryptic biomass', and was previously not quantified in the SEDAR 52 assessment. A proportion of this UCB biomass may be vulnerable to fishing and can be added to the fishable abundance when determining allowable catch. Dr. Lorenzen continued, adding that different assumptions can be made about the vulnerable proportion of UCB biomass, the necessary adjustment of the proxy for F at maximum sustainable yield (MSY; here, F at a 26% spawning potential ratio [$F_{SPR26\%}$] or $F_{SPR40\%}$) assuming a larger but less productive stock, and many other factors. Dr. Lorenzen stated that the GRSC interim catch analysis presents calculations based on various assumptions, but the sustainability implications of those assumptions cannot be readily assessed without the full integration of GRSC and other stock assessment information.

Dr. Lorenzen reviewed the catch projection scenarios presented to the SSC, which used a combination of UCB biomass fractions (0%, 13%, 15%, 22%, and 100%) at various F_{MSY} proxies ($F_{SPR26\%}$ or $F_{SPR40\%}$). Ultimately, the SSC chose to set the overfishing limit (OFL) at the three-year average of the projections including 13% of the UCB biomass at $F_{SPR26\%}$, resulting in an OFL equal to 25.6 million lbs (mp) whole weight (ww) for 2021.

The SEFSC then presented the interim analysis using the NMFS BLL. In general, the NMFS BLL shows a declining trend in relative abundance from 2016 (the terminal year for SEDAR 52) through 2019. This decline continued in 2020 also; however, the 2020 NMFS BLL data were not considered by the SSC for evaluating catch recommendations due to the poor sample coverage and high uncertainty in that year's data. Dr. Lorenzen said that the SSC recognized the NMFS BLL to be indicative of relative abundance trends for red snapper, noting that it also sampled the UCB area. As such, the SSC used the NMFS BLL interim analysis to establish an acceptable biological catch (ABC) recommendation for 2021 at 15.4 mp ww. This ABC is represented by the NMFS BLL catch recommendation using a 5-year average through 2019.

Several Committee members inquired about the large disparity between the recommended OFL and ABC and asked why the SSC votes related to the motions on the OFL and ABC were so close. Dr. Lorenzen responded that there were a variety of interpretations from the GRSC and the NMFS BLL among SSC members. Some members advocated taking a more conservative approach given the uncertainty surrounding the GRSC estimate of absolute abundance, along with the observed declining trend in abundance in the NMFS BLL, while others thought differently. He noted that the NMFS BLL does sample in the UCB, with some accounting for that habitat in the index leading to a conservative approach by the SSC. He stated that the SSC was tasked with reviewing a lot of information in a short time period, which was reflected in the SSC meeting report.

Mr. Anson asked what landings would be expected in Dr. Lorenzen's presented simulation if one assumed a large and highly productive stock. Dr. Lorenzen stated that if the simulated population was large and productive that it would not likely see the marked decrease in landings like those realized in the red snapper stock, which could indicate that the red snapper stock is not as productive as previously thought. Additionally, it is difficult to quantify the percentage of red snapper inhabiting the UCB that are vulnerable to harvest. This interpretation is further

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confounded by the lack of knowledge regarding the metapopulation dynamics of the stock and creates a situation where localized depletion could occur, which has previously been documented for red snapper in various areas in the Gulf. Dr. Frazer acknowledged that conservative approaches can be necessary depending on how risk-adverse resource managers were willing to be. He continued that state data collection programs could provide information that would detect localized depletion (i.e., lower total catch in numbers) in a timely manner that would allow for redirection in management measures, if warranted. These adaptive approaches should be examined in the future.

A Committee member asked for the rationale in calculating what percentage (e.g., 13% and 22%) of the UCB would be assumed vulnerable to fishing. The 13% estimate was generated by the random forest model that was used to calculate the high probability of encountering red snapper in the GRSC sample design. The 22% estimate was developed by SEFSC staff by analyzing that commercial vessel monitoring system (VMS) tracks overlaid on the UCB, and with recreational effort ascertained from iSnapper, to get a general estimate of fishing in the UCB. Another Committee member asked what the next steps were for the GRSC study. Dr. Stunz indicated that the reviewers' comments would be addressed before the final report is submitted in June 2021. Dr. Lorenzen mentioned that it was not yet clear how these independent broad studies would be directly implemented in the management process.

Council staff reviewed the public comment related to the framework action. While only seven formal public comments were received, several views were recorded on the Council's blog post and several unofficial comments were received on the Council's Facebook page. Official public comment was mixed, and indicated that red snapper was plentiful, and encouraged adoption of the GRSC results in modifying catch advice; however, other comments advised caution in interpreting the GRSC estimate given the uncertainty in the point estimates. A number of written letters, comprising two individual form letters, were also received. One form letter suggested an increase in allocation to commercial fishermen in the eastern Gulf to allow for harvest of the recovering eastern red snapper population; and, the other requested an increase to the commercial ABC to help the reduction of dead discards and allow for more entry into the fishery.

Council staff reviewed the framework action that contains a single action with two alternatives. The no action alternative would retain the current catch limits, while Alternative 2 would implement the catch limits recommended by the SSC at its March/April 2021 meeting. These alternatives do not consider state calibrations, as that consideration will be addressed in a separate document (see Tab B, No. 8).

The Committee recommends, and I so move, **in Action 1, to make Alternative 2 the preferred alternative.**

Alternative 2: Modify the red snapper OFL, ABC, ACLs, and recreational ACTs for 2021 based on the OFL and ABC recommendation of the Scientific and Statistical Committee (SSC) at the March 30 – April 2, 2021 SSC meeting. The OFL was based on the interim analysis informed by the results of the Great Red Snapper Count

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(GRSC). The ABC was based on the fishery-independent NMFS bottom longline (BLL) survey-based interim analysis.

| Catch Limit Type | Current Catch Limits | Calculation |
|----------------------|----------------------|--------------------------------|
| OFL | 25,600,000 | N/A |
| ABC | 15,400,000 | 39.8% less than OFL |
| Total ACL | 15,400,000 | ACL = ABC |
| Commercial ACL | 7,854,000 | 51% of ABC |
| Recreational ACL | 7,546,000 | 49% of ABC |
| Federal For-Hire ACL | 3,191,958 | 42.3% of Recreational ACL |
| Federal For-Hire ACT | 2,904,682 | 9% less than For-Hire ACL |
| Private Angling ACL | 4,354,042 | 57.7% of Recreational ACL |
| Florida ACL | 1,951,569 | 44.822% of Private Angling ACL |
| Alabama ACL | 1,145,026 | 26.298% of Private Angling ACL |
| Mississippi ACL | 154,568 | 3.55% of Private Angling ACL |
| Louisiana ACL | 832,493 | 19.12% of Private Angling ACL |
| Texas ACL | 270,386 | 6.21% of Private Angling ACL |

Note: Values are in pounds whole weight. Units are in MRIP-CHTS.

Note: Changes in the respective Gulf states ACLs are being considered simultaneously in another action to address issues related to calibration of recreational data among the various state data collection programs.

Motion carried 10-4 with two abstentions and one absent.

Final Action: Framework Action: Gulf of Mexico Red Snapper Recreational Data Calibration and Recreational Catch Limits (Tab B, No. 8)

Council staff presented the challenges of relating different state data collection currencies in which they report their catch and effort data for Gulf red snapper using monetary exchange rates between countries as an example. The presentation detailed why differing currencies were not additive, and needed to be calibrated to a common currency in order to be directly compared. Council staff followed this presentation with a review of written public comments received (64), and noted that the YouTube video explaining the document had thus far received 145 views.

Council staff reviewed the alternatives in the framework action. Ms. Leann Bosarge asked about the effects of the 2017 extended private angling fishing season for red snapper, which was extended by the Secretary of Commerce by 39 days to 42 days in total. Based on the definitions of overfishing, she said that she thought red snapper experienced overfishing in 2017, as a result of the extended fishing season. Ms. Guyas reminded the Committee of the motion passed in consideration of the previous agenda item (*Final Action: Framework Action: Modification of Annual Catch Limits for Gulf of Mexico Red Snapper (Tab B, No. 7)*), adding that this motion would increase the current OFL considerably compared to the current OFL (25.6 mp ww versus 15.5 mp ww). She then asked about the consequences of exceeding the ABC for Gulf red snapper. Ms. Mara Levy (NOAA General Counsel) replied that NMFS cannot allow fishing for

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red snapper to continue for a sector once that sector's ACL is met. Presently, the sum of the commercial and recreational ACLs equals the stock ABC. Further, the management of red snapper in the Reef Fish Fishery Management Plan (FMP) is currently not in compliance with the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), in that the current recreational ACL is being managed in a manner that has resulted, and is expected to continue to result, in ACL overages for that sector. From a biological perspective, Dr. Porch (SEFSC) stated that the effect of exceeding the ABC depended on the accuracy with which the OFL is thought to be known; if the OFL is thought to be appropriate for preventing overfishing, then just exceeding the ABC should not result in overfishing in a given year.

Mr. Andy Strelcheck (SERO) stated that NMFS has worked with the Council and the Gulf states to address the need for data calibration. He noted that NMFS had lost federal lawsuits related to red snapper recreational catch limits being exceeded in the recent past (2014 and 2017).

Mr. Anson discussed the differences between the state surveys and the MRIP program, and how they provide timelier and more precise catch and effort estimates for red snapper. He also detailed some of the effects of the differences in the state surveys and MRIP-FES, stating that landings as recorded for currently fished habitat would be substantially higher than currently reported and would represent a large fraction of the estimated biomass. Mr. Strelcheck replied that the calibrations would not be necessary if the state survey data were commensurate and could be directly compared and incorporated into a stock assessment. Mr. Anson then proposed a motion that would fix Alabama's state-specific ACL at the level established in Reef Fish Amendment 50A, with the remaining four states receiving a proportional increase based on the proposed increase to the ABC in the document discussed under Tab B, No. 7. Council staff advised the Committee that the proposed motion was in fact a reallocation among the states, and could not be included in a framework action and would require a plan amendment. Council staff also noted that the proposed motion would result in the predicted landings for the private angling component being exceeded, just as it would under Alternatives 1 and 5. Ms. Levy echoed Council staff, and added that the proposed alternative was more appropriate in Tab B, No. 7d, as it addresses revising the catch limits using the ABC used in the proposed motion.

The Committee recommends, and I so move, in Action 1, **to add a new Alternative 6 that would change the state-specific red snapper private angling component annual catch limits (ACL) using modified percentages from those identified in Amendment 50A in state survey currencies through 2023. Alabama would retain the ACL that was issued in Amendment 50A (1,122,662 lbs).**

| State | ACL (in MRIP-CHTS Currency) | Allocation % |
|--------------|-----------------------------|--------------|
| AL | 1,122,662 | 25.784% |
| FL | 1,965,169 | 45.134% |
| MS | 155,646 | 3.575% |
| LA | 838,295 | 19.253% |
| TX | 272,270 | 6.253% |
| Total | 4,354,042 | 100% |

Motion carried 8-6, with one absent and two abstentions.

Dr. Frazer asked about the consequences of allowing an uncalibrated catch on the management of red snapper, and acknowledged that NMFS would be required to constrain catch, applying payback provisions to those states that exceeded their state-specific private angling component ACLs in 2021. Dr. Porch stated that the SEFSC would be able to examine the results of the NMFS BLL for a change in trend in the abundance of the stock in January 2022. Further, by the early 2022, the state-specific catch and effort data would also be available for examination. Mr. Strelcheck replied that adding the newly proposed Alternative 6 was tantamount to status quo, which would necessitate a revision to the document's purpose and need as the alternative is equivalent to reallocation, delaying the implementation of the framework action beyond the end of 2021. Mr. Strelcheck again reviewed NMFS's vulnerability to litigation under the status quo, and that the states would remain vulnerable to payback provisions for any overages to their respective ACLs. Ms. Levy clarified that NMFS must determine whether proposed management measures comply with the Magnuson-Stevens Act, noting that knowingly exceeding the ABC would be very difficult to defend as complying.

Ms. Boggs asked whether Alternatives 3-5, which use a buffer to reduce state-specific catch limits to prevent exceeding the combined total private angling component's ACL, satisfy the necessity to calibrate the landings data. Ms. Levy replied that using the buffers would constrain the landings appropriately under Alternatives 3 and 4 (but not Alternative 5), and would thereby prevent the component from exceeding its ACL. Mr. Banks asked under what ACLs would the states be fishing if the Council requests that the proposed management measures not be implemented until 2022. Ms. Levy replied that the catch limits would apply in the year in which they are implemented, unless NMFS can justify the Council's request for delayed implementation. Ms. Bosarge reminded the Committee that the same concessions being considered to accommodate the private angling component of the recreational sector would need to fairly and equitably be considered for the for-hire component and the commercial sector also.

Revised Public Hearing Draft Amendment 53: Red Grouper Allocations and Annual Catch Levels and Catch Targets (Tab B, No. 9)

Dr. Cody (NOAA OST) and Dr. Shannon Cass-Calay (SEFSC) presented weight estimation methods for determining recreational catch in pounds from catch reported in numbers of fish. Dr. Cody first presented on the MRIP-APAIS Average Weight Procedure. He noted that data collected by APAIS are used to estimate catch rates and trip characteristics for two-month waves. He then discussed the APAIS design, sample weights, and catch rate estimates. He explained that total catch includes landings and releases, as numbers of fish, with landings including both observed and unobserved harvest. Standard length-weight relationship models are used to impute missing data, which can include missing length or weight data. When both length and weight data are missing, observations are imputed by a combination of "hot deck" and "cold deck" imputation. Catch estimation is calculated from a weighted APAIS catch rate and weighted FES effort.

Dr. Cass-Calay then presented the SEFSC weight estimation procedure. While MRIP provides species-specific catch estimates by stratum in numbers of fish, corresponding weight measurements are not always available due to sampling constraints or incomplete self-reporting. However, ACL monitoring requires estimates in weight, and so a standard methodology was needed to estimate missing recreational weights. In this process, average weights from intercept data for each strata are calculated, and then strata that meet a minimum sample size threshold are identified. Finally, an estimate of landings-in-numbers is converted to landings-in-weight by applying an appropriate average weight.

Three factors explain why predicted landings from the SEDAR 61 (2019) assessment model differ from landings estimates in the ACL monitoring dataset: input data, uncertainty assumed in assessment, and differences in weight estimation. For SEDAR 61, recreational landings were input as numbers, and therefore the assessment model was fitting to numbers and not weight. The assessment model also assumes a greater uncertainty in recreational landings compared to commercial landings, which results in predicted landings that are not identical to input landings. The assessment model converts predicted landings in number into weight units through use of the length-weight equation, whereas MRIP estimates are based on stratified observations of average weight. Going forward, the SEFSC can look into modeling recreational landings in weight instead of numbers during ongoing research track assessments, but that effort will require an assumption about the CV around these weight estimates.

Dr. Simmons discussed management considerations for using interim ABC analyses. She noted that the interim analysis uses a harvest control rule, whereby the sector allocations of 76% commercial and 24% recreational and corresponding ABC of 4.9 mp gw was used in conjunction with the NMFS BLL index of relative abundance to revise future catch projections. The 4.9 mp gw ABC is not the Council's current preferred alternative in Reef Fish Amendment 53, and so the SEFSC would have to run additional analyses to update the interim analysis to include the multitude of ABC recommendations for the SSC and then Council to consider. As such, the interim analysis should not be used to modify ABC catch advice until the Council selects allocations and corresponding ABC catch advice. Thereafter, interim ABC analyses could continue to be updated annually to consider new catch advice for the SSC and Council. Dr. Freeman discussed a motion from the Reef Fish AP at its February 2021 meeting to modify the reef fish and CMP fishery management plans to automate catch advice based on interim analyses.

Dr. Freeman reviewed the actions and alternatives in Amendment 53 to the Reef Fish FMP and discussed potential next steps. Dr. Freeman discussed the OFL, ABC, total and sector ACLs resulting from the new Alternative 6 for Action 1. He also noted a new table that shows the predicted closure date for the recreational sector based on the recreational ACL. Ms. Muehlstein discussed plans to solicit public comment and hold virtual public hearings. Dr. Freeman discussed motions from the Reef Fish AP on the two actions. The Reef Fish AP selected Action 2, Alternative 3 as its preferred, which is also the Council's current preferred alternative. The Reef Fish AP made a motion for a new alternative for Action 1 which would set the commercial ACL at 3.00 mp gw; Dr. Freeman noted that the motion to make that new alternative the preferred failed for lack of a second, as did a motion to make Alternative 4 the preferred.

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For the purpose of time, the Committee Chair requested that questions and motions wait until Full Council.

Remaining Items from January 2021 SSC Summary Report (Tab B, No. 10)

This item was postponed until Full Council on Thursday, April 15, 2021.

Remaining Items from February 2021 Reef Fish AP Summary Report (Tab B, No. 9c)

This item was postponed until Full Council on Thursday, April 15, 2021.

Discussion of Implementation of the DESCEND Act of 2020 (Tab B, No. 12)

This item was postponed until Full Council on Thursday, April 15, 2021.

Other Business

Historical Captain's Permits

This item was postponed until Full Council on Thursday, April 15, 2021.

Mr. Chair, this concludes my report.