SUMMARY MINUTES

Scientific and Statistical Committee

Pacific Fishery Management Council
Online Meeting

April 5, 2024

Members in Attendance

Dr. Cheryl Barnes, Oregon State University, Newport, OR
Dr. John Budrick, California Department of Fish and Wildlife, San Carlos, CA
Mr. Alan Byrne, Idaho Department of Fish and Game, Boise, ID
Dr. John Field, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA
Dr. Chris Free, University of California Santa Barbara, Santa Barbara, CA
Dr. Owen Hamel, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Michael Hinton, San Diego, CA
Dr. Dan Holland, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Galen Johnson, Northwest Indian Fisheries Commission, Olympia, WA
Dr. Kristin Marshall, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Tommy Moore, Northwest Indian Fisheries Commission, Olympia, WA
Dr. André Punt, University of Washington, Seattle, WA
Dr. William Satterthwaite, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA
Dr. Jason Schaffler (SSC Chair), Muckleshoot Indian Tribe, Auburn, WA
Dr. Ole Shelton, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA
Dr. Cameron Speir (SSC Vice-Chair), National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA
Dr. Tien-Shui Tsou, Washington Department of Fish and Wildlife, Olympia, WA

Members Absent

Dr. Matthew Reimer, University of California Davis, Davis, CA

SSC Recusals for the April 2024 Meeting		
SSC Member	**Issue**	**Reason**
Dr. Owen Hamel	F.2 Biennial Harvest Specifications for 2025-26 Fisheries	Dr. Hamel supervises the WA Cabezon catch-only model author.

SSC Administrative Matters

Dr. Jason Schaffler (SSC Chair) called the meeting to order. Mr. Merrick Burden briefed the Scientific and Statistical Committee (SSC) on their tasks at this meeting and answered questions from SSC members.

The April 2024 SSC agenda was approved, with one update for the discussion lead role to Dr. Tommy Moore on Agenda Item G.2. Several suggested edits were made to the March 2024 SSC Minutes and adopted as final. Thus, the April 2024 briefing book version of the March 2024 SSC Minutes will be updated to reflect SSC approved changes and the final document will be posted to the SSC minutes archive website. Subcommittee assignments were confirmed with no modifications.

Open discussion included updates to planning for the Council Coordination Committee's (CCC) Scientific Coordination Subcommittee meeting (SCS8) to be held in August 2024. Sub-themes, meeting format, keynotes, and case studies were briefly described based on recent planning. The SSC discussed potential attendees and plans to finalize PFMC SSC members to attend at the June 2024 meeting.

Per suggestion in March 2024, a public comment period was conducted at the beginning of the day to allow for relevant public comments to be made and considered prior to the SSC taking up an Agenda Item. No public comments were made during this period.

G. Administrative Matters

3. Membership Appointments and Council Operating Procedures (SSC Closed Session)

I. Coastal Pelagic Species Management

3. Pacific Sardine Harvest Specifications and Management Measures for 2024-25 – Final Action

The Scientific and Statistical Committee (SSC) reviewed the 2024 stock assessment (Agenda Item I.3 Attachment 1) of the northern subpopulation (NSP) of Pacific sardine, as modified in Agenda Item I.3 Supplemental Attachment 3. Peter Kuriyama (Southwest Fisheries Science Center) presented the results of the stock assessment and André Punt (SSC, STAR Chair) provided an overview of the Stock Assessment Review (STAR) Panel Report (Agenda Item I.3 Attachment 2). The SSC appreciates the effort by the stock assessment team to improve the assessment model in response to recommendations from previous full and update assessment reviews.

The modification described in Agenda Item I.3 Supplemental Attachment 3 was the removal of the model year 2020 semester 2 (spring 2021) acoustic-trawl (AT) survey biomass estimate. This estimate was removed due to a lack of spatial coverage for that survey and because all of the sardine biomass observed in that survey was later determined to be southern subpopulation (SSP) rather than the NSP it was originally attributed to. This means that the NSP biomass estimate from that survey, which was already low, should have been even lower. When that survey was removed from the assessment, the new 2024 biomass estimate was slightly higher than originally estimated, despite the observation of low NSP biomass in the excluded survey. However, the effect on estimated age-1+ biomass for the upcoming management year is small (58,614 mt vs. 56,428 mt). The spring 2021 survey lacked spatial coverage of areas where the NSP were most likely to be present based on the revised habitat model. In the future, the SSC recommends a consistent and repeatable approach, with a clearly explained rationale, for the inclusion or exclusion of spring surveys.

The SSC endorses the modified 2024 NSP assessment model as the best available science for use in management of the NSP. Major improvements from the last benchmark assessment in 2020 and the 2021 and 2022 updates include routine use of inshore AT survey observations and an updated habitat model for allocating catches and AT biomass to the NSP and SSP.

The model estimate for age-1+ biomass on July 1, 2024 is 58,614 mt (Table 6 of Supplemental Attachment 3). Based on application of the Harvest Control Rule (HCR) with the temperature-dependent EMSY of 0.163 and the static DISTRIBUTION term of 0.87, the overfishing limit (OFL) is 8,312 mt.

The SSC recommends a category 2d sigma (baseline value of 1.0 with a time-dependent increase as described on Page 15 of the assessment) be used for calculating the 2024-2025 ABC from the 2024-2025 OFL. Table 6 of Supplemental Attachment 3 provides the ABC values for P* alternatives that may be selected by the Council, using the ABCTier 2 row.

The SSC notes that since the HCR was revised in 2013, temperature measurements have suggested an EMSY close to the upper end of the recommended range, despite evidence for low productivity and abundance since that time. The SSC recommends revisiting the analysis and assumptions informing the NSP Pacific sardine HCR, given evidence that the adopted relationship between sardine productivity and ocean temperatures is not currently valid.

A substantial proportion of the U.S. catch in recent years (e.g., 87 percent in management year 2023-2024) is inferred to be from the SSP (see Table 9.1 of the assessment). The SSC notes that the catch of sardine attributed to the NSP in Mexican waters appears to have declined over time, suggesting that the static DISTRIBUTION term used to apportion the OFL for the NSP should also be reconsidered.

There is no information on the strength of the 2023 year-class from any data source in the assessment, so it was estimated from the stock-recruitment relationship. A substantial proportion of estimated 1+ biomass available for the 2024-2025 fishing year derives from the 2023 year-

class. The lack of an empirical estimate of age-1 biomass for 2024 adds unquantified uncertainty to the biomass estimated to be available in 2024-2025. Pre-specifying a fixed value of Q (survey catchability) leads to un-quantified uncertainty in biomass, and Japanese sardine contributed an unknown proportion of the estimated total sardine biomass. There are also uncertainties associated with stock-recruitment steepness, the natural mortality rate, AT target strength and species composition, and limited AT survey age composition data that were poorly fit by the model.

The assessed July 1, 2024 summary (age-1+) biomass of 58,614 mt is above the Minimum Stock Size Threshold (MSST) of 50,000 mt, but below the rebuilding target of 150,000 mt. However, the SSC notes that the difference between the assessed biomass and the MSST is substantially smaller than the uncertainty in the assessed biomass.

The SSC endorses the research recommendations of the STAR Panel to improve future assessments (Agenda Item I.3 Attachment 2). The SSC reiterates that the assessment and OFL apply to the NSP. An increasing proportion of the U.S. sardine catch, particularly in southern California waters, has been assigned to the SSP based on the habitat model. The SSP is not currently included in the Coastal Pelagic Species Fishery Management Plan. Consequently, catches of the SSP are counted against the allowable catch for the NSP, but the biomass of the SSP is not included in the assessed NSP biomass. The SSC recommends that the Council consider identifying management approaches for the SSP given its inferred increased presence in U.S. waters.

SSC Notes

The natural mortality (M) prior really applies to older fish that are closer to fully grown, so applying the prior for the average M across all ages is not strictly correct, but likely has only a small impact in this case due to the wide prior. A priority should be put on developing an approach to modify the prior to reflect average M when the Lorenzen or another age-varying M formulation is used. An alternative approach would be to be able to limit the range of ages to average over for application of the prior, which would require a modification to Stock Synthesis (version 3), and still require some thought as to the appropriate range of ages across which to average.

Low steepness is not necessarily implausible, as there may be extended periods of low productivity/low steepness alternating with periods of high productivity/high steepness, as originally proposed by Jacobson and MacCall (1995, cited in the assessment). That work provided the conceptual basis for the environmentally driven control rule, although there is some recognition that the mechanism for this variable productivity (proposed by Jacobson and MacCall as temperature) is likely incorrect. Further research into dynamic steepness values and/or appropriate priors for CPS could be warranted.

It may be helpful for this or other research to extend future and/or research assessments back further in time to provide estimates of recruitment and productivity during both the rise and the

fall of sardine over the past 3-4 decades. Although data for the early period of the rise are sparse, the 2014 assessment extended back to 1993, and the 2010 assessment extended back to 1981.

Tables such as 9.14 should be broken out by semester to make it easier to follow cohorts, and make it clear why modeled biomass tends to decrease for semesters where no recruitment is modeled to take place.

*The 2020-1 (spring) survey was really designed for anchovy, not sardine. Still, it seems like there should be a consistent rationale for the inclusion/exclusion of *all* of the spring surveys. Rationales for catch attributions to subpopulations based on considerations beyond strict application of the habitat model should be clearly explained.*

According to Table 9.14, in Model Y-S 2024-1, about 19.6K out of the 56.4K (about 34%) age-1+ biomass is from age-1. This compares to 11.4K out of 28.3K (about 40%) when this concern was raised for the 2020 assessment (those are the numbers from the 2020 assessment, 2024 assessment says 2020-1 was 8.2K out of 28.3K).

Appendix A of the assessment is intended to present a sensitivity analysis for the possibility that 30% of the sardine observed by the AT survey in 2023 may have been Japanese sardine. However, if this were the case, survey Q should not be reduced from 1.0 to 0.7 (which would be appropriate if 30% of the Pacific sardine present were being missed), rather it should be increased to 1.4 to reflect the inclusion of Japanese sardine that are not Pacific sardine (i.e., for every 70 tons of Pacific sardine seen, 30 tons of Japanese sardine were seen, so seeing 100/70 = 1.42 tons of "sardine" for every ton of Pacific sardine).

The legends for Figures 10.36 through 10.38 should explain the meaning of the different colors. In addition, the reference to year labels in the legend of Figure 10.36 should be removed, or year labels should be added to the figures.

From April 2023, still applies now: Analyses have estimated stochastic E_{MSY} as 0.18 when the effects of temperature on productivity are ignored (Agenda Item I.1.b Revised Analysis March 2014). This value could possibly be an option in the future, pending a reanalysis of the HCR. It was also noted that the productivity function used to inform this HCR was based on recruits-per-spawner, not absolute recruitment. However, this is a minor point, the more important point is that the stock has declined substantially in the face of warmer conditions, and this warrants a reanalysis or revision of the temperature-dependent HCR.

From April 2023, still applies now: Discussion during the September 2022 SSC-ES meeting (Agenda Item H.1.a SSC-ES Report 1 March 2023) noted that we expect to see more SSP in U.S. waters over time in the face of climate change.

Based on genetic analysis, some of the sampled fish were Japanese sardine. Like SSP, Japanese sardine is not included in the CPS FMP.

G. Administrative Matters

2. Council Operations and Priorities

SSC Notes

The SSC was asked to review and comment on the recommendations and discussion of the Council as reported in Agenda Item G.2.a, COTW Report 1 April 2024.

1. *In person SSC meetings are preferred because they result in better and more exchange when evaluating models, methodologies, and data constructs. The issues being handled by the SSC are usually complex, and in-person meetings facilitate more thorough discussion.*
2. *Remote meetings are now scheduled for once a year. They are generally less efficient. Reports from remote meetings reflect the difficulties of discussing detailed technical issues in the remote meeting setting. However, a remote meeting with a concise and short agenda (one day, e.g. administrative as for this meeting) can be easier to conduct than a meeting that requires handling models, methodologies, and data constructs.*
3. *Virtual SSC meetings could be held non-congruently with Council meetings within the constraints of timing issues for the Briefing Book (BB). Consideration could be given to shifting BB deadlines and timing. If the BB schedule was earlier with respect to the Council meeting, the SSC could schedule its first day earlier and then schedule an additional day later.*
4. *Holding meetings in difficult-to-travel-to locations imposes higher costs. Meeting locations not on major travel routes could result in higher travel costs and longer or less convenient travel times for participants. This could place increased time demands on participants, which can have an impact on their other duties.*
5. *Restricting the number of terms at-large members can serve for on the SSC would introduce inefficiency. The tasks of the SSC include review and comment on items stretching across a number of years, which benefits most from consistency in reviewer/scientist participation. It was also noted that these positions are generally held by those volunteering their expertise and time. Frequent changes in these positions may well result in lessening of applicant interest and willingness to volunteer. If the Council wishes to implement limits on the number of terms at-large SSC members can serve, they should be implemented in a staggered manner to help maintain consistency in SSC activities.*
6. *The SSC workload is increasing and a reduction in membership will reduce the Committee's ability to respond to Council requests.*
7. *When considering restructure and need for ad hoc committees and work groups, it was noted that working groups are informal but valuable to Committee work. For example,*

the Ecosystem Workgroup provides scientific coverage not possible otherwise, and it would be desirable to maintain it.

8. *The SSC would like additional information from the Council regarding the proposed BLUF structure for advisory body reports. The current format provides a structured way to provide advice on scientific and technical matters.*

E. Salmon Management

4. Methodology Review Preliminary Topic Selection

The Scientific and Statistical Committee (SSC) met to discuss potential topics to be reviewed by the SSC Salmon Subcommittee (SSC-SSC) in fall 2024. The Salmon Technical Team (STT) was present for the discussion but did not propose any methodology review topics to the SSC. The SSC notes that many possible topics for salmon methodology review have come up in other discussions in the Council process over the past year, including but not limited to:

1. Forecast evaluation metrics. In its November 2023 statement on the salmon methodology review (Agenda Item D.3.a Supplemental SSC Report 1 November 2023), the SSC recommended reducing redundant metrics for evaluating forecast performance. Several metrics have been used and work could identify which metrics should be emphasized for various contexts.
2. Integration of salmon stoplight indicators into the pre-season salmon process. Currently, the salmon stoplight indicators are presented in the California Current Integrated Ecosystem Assessment Team's Ecosystem Status Report each March. This type of ecosystem information may be valuable to pre-season salmon management analyses and actions.
3. Incorporation of uncertainty into salmon management. Forecasts and abundance estimates should include uncertainty bounds.
4. Application of risk tables to the Salmon Fishery Management Plan (FMP). Council action in March 2024 tasked the Ecosystem Work Group to work with National Marine Fisheries Service and the appropriate advisory bodies to "broaden the application of risk tables to the Salmon FMP as described in Agenda Item H.2.a Supplemental HC Report 1."
5. Comprehensive review of salmon reference points. The SSC reiterates its suggestion to establish a formal process that outlines how and when salmon reference points and conservation objectives are reviewed and updated (see Agenda Item D.4.a Supplemental SSC Report 1 April 2022 and the SSC-SSC report appended to Agenda Item C.10.a Supplemental SSC Report 1 June 2021). Conservation objectives and reference points (e.g., S_{MSY} and F_{MSY}) for Sacramento River Fall Chinook (SRFC) and multiple Washington Coastal Fall Chinook were derived from publications produced in 1984 and do not incorporate any information on run sizes, productivity, or other available biological parameters from the last 40 years. In contrast, the SSC notes that the values for reference points are routinely updated as a part of the groundfish stock assessment process, and

populations with assessments that do not incorporate recent data are identified as having greater uncertainty.

6. Investigation of whether the performance of the Oregon Production Index-Hatchery (OPI-H) forecast might be improved with disaggregation. Currently, the OPI-H forecast includes natural origin Coho, which are also separately forecasted and then subtracted from the aggregate OPI-H forecast before use in the Council salmon management process. During discussion at the 2023 Salmon Methodology Review, the analysts for the new OPI-H methods mentioned that a next step was looking at whether forecasting the current aggregate might be improved by forecasting different components separately, starting with separating out the natural origin fish. Documentation of how the aggregate OPI-H forecast is broken into components used by the STT is also needed, following best practices for technical documentation and with enough detail that it can be reproduced by other users.
7. Exploration of alternative approaches to the Sacramento Index forecast. This topic was identified as a potential topic in April 2023, and remains a high priority topic (Agenda Item E.4.a Supplemental SSC Report 1 April 2023).

The Research and Data Needs database (research-pfmc.psmfc.org) lists a number of potential projects ranked as "high priority" for PFMC salmon management. Some of these projects may have been completed since the last time the list was reviewed (2018). One potential use of time at the Salmon Methodology Review in fall of 2024, or at an SSC-SSC meeting, is review of that list. If any of these projects have been completed outside the Council process, they may be ready to be reviewed and incorporated into Council salmon management.

SSC Notes

- *The SSC notes that documenting models used in public resource management is necessary and should follow best practices and be repeatable by other users. The SSC further notes it is important to quantify the uncertainties in the FRAM outputs.*
- *Prager and Mohr 2001 (North American Journal of Fisheries Management 21(3):533-547 https://doi.org/10.1577/1548-8675(2001)021<0533:THRMFK>2.0.CO;2) may provide a helpful template or framework for approaching model documentation.*
- *This paper describes an approach for quantifying, and potentially responding to, bias and/or uncertainty in abundance forecasts: https://doi.org/10.1016/j.fishres.2022.106502*
- *It was brought up in an STT meeting this winter that the methods for "impact neutral" calculations for changing ocean fishery regulations on in-season calls have not been reviewed. It is unclear whether this analysis is considered an STT- or Council-related analysis, or is simply considered an analysis by the proponents of the regulation change (who happened in the past year to be analysts on or active with the STT). If this is found to be a Council analysis, the SSC Salmon Subcommittee could review that at the Salmon Methodology Review.*

F. Groundfish Management

2. Biennial Harvest Specifications for 2025-26 Fisheries – Final Preferred Alternatives

The Scientific and Statistical Committee (SSC) reviewed the draft 2025 and 2026 overfishing limits (OFLs) and acceptable biological catches (ABCs) for US West Coast groundfish stocks and stock complexes (Agenda Item F.2, Supplemental Revised Attachment 1). This included harvest specifications under default and alternative harvest control rules (HCRs) as adopted in November 2023.

For quillback rockfish off California, the SSC endorses the values for the 2026 OFLs and ABCs for Alternatives 1, 2, and 4 (listed in Table 3 of Attachment 1) as technically correct and consistent with the adopted rebuilding plan. For 2026 the OFLs for Alternatives 1, 2 and 4 would be 1.77, 1.77, and 1.81 mt, respectively, conditional on the Council's choice of a final alternative for 2025.

The SSC reviewed the new catch-only projection for Washington cabezon (Agenda Item F.2, Supplemental Revised Attachment 2) and found it to be technically sound. The harvest specifications previously recommended by the SSC and adopted by the Council were mistakenly carried over from a past biennium. The 2019 Washington cabezon assessment did not contain projections for 2025-26 and thus a catch-only projection was needed. The new analysis applies the methods used in 2019, using catches between 2018-2023 that were provided by the Washington Department of Fish and Wildlife. For 2024, an average of the 2022 and 2023 catches was used. For years 2025 and beyond, catches were set equal to the projected ABC based on a category 3 sigma (σ) and a P* value of 0.45. For 2025, this projection results in an OFL of 11.72 mt and an ABC of 9.12 mt (Appendix 1 of Attachment 1). For 2026, the OFL would be 11.59 mt and the ABC would be 9.02 mt, conditional on the Council default P* = 0.45 for 2025 (Appendix 2 of Attachment 1). The SSC endorses these values as best available science for informing management.

SSC Notes

Quillback Alternative 3: The CDFW proposed Alternative 3 is intended to be a MSY proxy from the 2021 assessment. The SSC cannot endorse the 2025 Alternative 3 value as an OFL because the assessment was adopted as a category 2 assessment. No OFL has been proposed for 2026 under that alternative.

<u>Cabezon notes</u>
The catch projection used the 2019 methods, which combined a length-based spawning potential ratio (LBSPR) approach with Simple Stock Synthesis (SSS).

The text of Attachment 2 should be updated to have consistent documentation of years of catch data. In paragraph 2, the text should read "but uses the actual catches for years 2018-2023 (Table 1). Updated catches for 2018-2023, which includes Marine Area 4B, were provided by the Washington Department of Fish and Wildlife using RecFIN extractions."

The GMT determined that the WDFW is a more appropriate source of data than the GEMM report for WA cabezon, as an important catch area is excluded in the GEMM report. This catch area was also included in the catch history of the original assessment.

If an equilibrium MSY estimate for WA cabezon had been provided in 2019, this catch projection may not have been needed. Future discussions of the groundfish stock assessment TOR should revisit whether requiring equilibrium MSY estimates might be useful for streamlining the development of future harvest specifications.

The GFSC should consider whether using projections for 10 years is prudent for category 3 assessments in the development of future TORs for stock assessments.

The catch projection report discussed the potential for the next Cabezon assessment to use an integrated modeling approach, which would integrate more length data and potentially allow for a category 2 designation and stock status determination. The SSC could revisit this in June 2024 when assessment prioritization is finalized.

G. Administrative Matters

3. Future Council Meeting Agenda and Workload Planning

The Scientific and Statistical Committee (SSC) discussed workload planning and has the following updates to its March 2024 statement under this agenda item.

The SSC Coastal Pelagic Species (CPS) Subcommittee will review and update Terms of Reference for the CPS Stock Assessment Review Process and the Accepted Practices Guidelines for CPS stock assessments on April 17, 2024, during a virtual meeting.

The SSC proposes the SSC Groundfish and Economics Subcommittees hold a meeting to discuss methods for the state/federal catch proportion analysis (recreational, commercial, and surveys) in summer of 2024, prior to application of these methods in the Phase 2 groundfish stock definition analyses. This meeting would require participation from the Groundfish Management Team (GMT) and the Groundfish Advisory Subpanel (GAP). Scheduling is subject to when the analysis and analysts are available. The SSC requests guidance on the optimal timing of this review and the scope of the review to inform Council decisions. The SSC suggests that this could be a virtual meeting.

The SSC proposes holding a Groundfish Methodology Review to consider the use of the Fourier Transformed Near-Infrared Spectrophotometry (FT-NIRS) method for estimating groundfish ages to be utilized in future stock assessments in late summer 2024 at a time and place to be determined. The SSC suggests that this could be a virtual meeting.

The SSC Ecosystem-Based Management Subcommittee proposes a virtual meeting on August 5, 2024 to review further development of risk tables for groundfish and their applications in support of Fishery Ecosystem Plan Initiative 4 to report to the Council at the September 2024 Council

meeting. Anticipated participants include members of the Ecosystem Workgroup (EWG) and the Ecosystem Advisory Subpanel (EAS). The SSC Groundfish Subcommittee will also be invited.

The Council Coordination Committee's (CCC) Scientific Coordination Subcommittee meeting (SCS8) will be hosted by the New England Fishery Management Council and will be held during the week of August 26, 2024 in Boston, MA. Four members of the PFMC SSC, with at least one who is an economist, and one Council staff member are expected to attend.

The SSC Ecosystem-Based Management Subcommittee proposes a virtual meeting in Fall 2024 to review krill indicators in the California Current Integrated Ecosystem Assessment Team's Ecosystem Status Report, as supported by the Council in March 2024. This topic and the risk tables topic were originally envisioned to be reviewed together but the presenters for the krill topic are not available in August.

The SSC proposes that the full SSC hold a meeting to discuss Phase 2 Stock Definition analyses as an extra day added at the beginning of the September SSC meeting in Spokane. The SSC notes that a full or half- day may be necessary if three major elements of Phase 2 are all available for review at that time (as suggested by Agenda Item E.8 Attachment 2 in November of 2023). These include 1) literature review on all remaining undefined groundfish species, 2) updated Productivity and Susceptibility Analysis, and 3) Federal/state waters catch proportion analysis. If only one or two of the analyses to support these decisions are requiring review in September, a full day may not be necessary.

The SSC proposes the SSC Salmon Subcommittee hold a Salmon Methodology Review with participation from the Salmon Technical Team (STT), and the Model Evaluation Workgroup (MEW) in the first week of October 2024, pending selection of final topics and completion of materials, at a time and place to be determined. If the Council finalizes a list of topics at the September meeting, the review would need to take place the first week of October to meet the November Advanced Briefing Book deadline. Thus, a short time frame exists between the September Council meeting and the Methodology Review.

The SSC proposes the SSC Groundfish Subcommittee hold a virtual meeting to discuss and prepare the Accepted Practices Guidelines for Groundfish Stock Assessments in 2025 and 2026 document in the late fall of 2024 to prepare the final draft document for the Council Agenda Item scheduled for March 2025.

The SSC proposes the SSC Groundfish Subcommittee hold a meeting to discuss "Approaches to Deal with Large Closed Areas and Other Spatial Issues in Stock Assessments" in 2024 at a time and place to be determined, with participation from the GMT and the GAP, and subject to analysis being completed and ready for review.

The SSC proposes holding a workshop in 2024 on use of remotely operated vehicle (ROV) data in stock assessments to facilitate inclusion in future groundfish assessments, dependent on proponents readiness and the provision of additional information to review by CDFW. This

includes review of abundance estimates for quillback rockfish and consideration of methods for integration of results in future stock assessments.

The SSC had previously proposed holding a Workshop to Develop Alternative Harvest Control Rules for Pacific Spiny Dogfish in 2024, particularly if Pacific spiny dogfish or another elasmobranch species is included in the stock assessment prioritization for 2025 assessments. Given the Council's March 2024 motion regarding the preliminary list of species for assessment in 2025, this workshop could be postponed. However, the preliminary list of species for potential assessment in 2027 does include Pacific spiny dogfish, and therefore the SSC notes this workshop would require that an analysis be developed and available to review.

The Year-at-a-Glance summary (Agenda Item G.4 Attachment 1) currently indicates the Research and Data Needs topic is scheduled for preliminary action during the September 2024 Council meeting with final action during the November 2024 Council meeting. The SSC is supportive of moving preliminary action for this topic to the November 2024 Council meeting with final action during the March 2025 Council meeting, based on anticipated SSC workload.

Proposed Workshops and SSC Subcommittee Meetings for 2024 and Beyond *Italic items are noted as potential or preliminary* *Shaded rows indicate newly added items since the prior statement*							
	Workshop/Meeting	**Potential Dates**	**Sponsor/ Tentative Location**	**SSC Reps.**	**Additional Reviewers**	**AB Reps.**	**Council Staff**
1	CPS Stock assessment TOR and Accepted Practices	April 17, 2024	Council/Virtual	CPS Subcommittee Members	NA	CPSMST CPSAS Advisors	Doerpinghaus
2	Meeting to Discuss Methods for the State/Federal Catch Proportion Analysis (Recreational, Commercial, Surveys)	Summer 2024 TBD	Council/Virtual	Groundfish/ Economics Subcommittee Members	NA	GMT GAP Advisors	Bellman
3	Groundfish Methodology Review of FT-NIRS Method for Estimating Fish Ages Utilized in Stock Assessments	Summer 2024 TBD	NWFSC/Virtual	Groundfish Subcommittee Members	CARE	NA	Bellman
4	Ecosystem-Based Management (EBM) Subcommittee Review of Risk tables	August 5, 2024	Council/Virtual	EBM Subcommittee	NA	EWG EAS	Bellman
5	CCC Scientific Coordination Subcommittee Meeting (SCS8)	August 26-29, 2024	NEFMC/ Boston, MA	SSC members TBD	NA	NA	Bellman
6	Ecosystem-Based Management (EBM) Subcommittee Review of Krill indicators	Fall 2024 TBD	Council/Virtual	EBM Subcommittee	NA	EWG EAS	Bellman
7	Review Phase 2 Stock Definition Analysis	Extra SSC added to September SSC meeting	Council/Spokane	Full SSC	NA	NA	Bellman
8	Salmon Methodology Review	First week of October 2024 TBD	Council/TBD	Salmon Subcommittee	NA	STT MEW	Bellman/Ehlke

Proposed Workshops and SSC Subcommittee Meetings for 2024 and Beyond *Italic items are noted as potential or preliminary* *Shaded rows indicate newly added items since the prior statement*							
Workshop/Meeting		**Potential Dates**	**Sponsor/ Tentative Location**	**SSC Reps.**	**Additional Reviewers**	**AB Reps.**	**Council Staff**
9	Groundfish Stock Assessment Accepted Practices Guidelines for 2025-2026	Fall 2024	Council/Virtual	Groundfish Subcommittee	NA	GMT GAP Advisors	Bellman
10	*Approaches to Deal with Large Closed Areas and Other Spatial Issues in Stock Assessments*	*By End of 2024 TBD*	*Council/TBD*	*Groundfish Subcommittee Members*	*NA*	*GMT GAP Advisors*	*Bellman*
11	*Use of ROV Data in Stock Assessments Workshop*	*By End of 2024 TBD*	*TBD*	*Groundfish Subcommittee Members*	*TBD*	*NA*	*Bellman*
12	*Proposed Workshop to Develop Alternative Harvest Control Rules for Spiny Dogfish*	*TBD*	*TBD*	*Groundfish Subcommittee Members*	*TBD*	*GMT GAP Advisors*	*Bellman*

SSC Subcommittee Assignments

Salmon	Groundfish	Coastal Pelagic Species	Highly Migratory Species	Economics	Ecosystem-Based Management
Alan Byrne	**John Field** (Chair)	**André Punt**	**Michael Hinton**	**Dan Holland**	**Kristin Marshall**
John Budrick	**Cheryl Barnes** (Vice-Chair)	John Budrick	Cheryl Barnes	Chris Free	Cheryl Barnes
Owen Hamel	John Budrick	Alan Byrne	John Field	Michael Hinton	John Field
Galen Johnson	Chris Free	John Field	Dan Holland	André Punt	Chris Free
Tommy Moore	Owen Hamel	Owen Hamel	Kristin Marshall	Matthew Reimer	Dan Holland
Will Satterthwaite	Kristin Marshall	Michael Hinton	André Punt	Cameron Speir	Galen Johnson
Jason Schaffler	Tommy Moore	Will Satterthwaite	Matthew Reimer		Tommy Moore
Ole Shelton	André Punt	Tien-Shui Tsou			André Punt
Cameron Speir	Jason Schaffler				Matthew Reimer
Tien-Shui Tsou	Tien-Shui Tsou				Will Satterthwaite
					Ole Shelton
					Cameron Speir

Bold denotes Subcommittee Chairperson

ADJOURN

PFMC
06/11/24