

SUMMARY MINUTES

Scientific and Statistical Committee

Pacific Fishery Management Council

Online Meeting

September 6-8, 2022

Members in Attendance

Dr. John Budrick, California Department of Fish and Wildlife, Belmont, CA

Dr. John Field, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA

Dr. Melissa Haltuch, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA

Dr. Dan Holland, SSC Chair, 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. Melissa Monk (alternate for Dr. John Field), National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA

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

Dr. William Satterthwaite, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA

Dr. Jason Schaffler, Muckleshoot Indian Tribe, Auburn, WA

Dr. Ole Shelton, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA

Dr. Cameron Speir, 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

Mr. Alan Byrne, Idaho Department of Fish and Game, Boise, ID

Dr. Owen Hamel, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA

Dr. André Punt, University of Washington, Seattle, WA

SSC Recusals for the September 2022 Meeting		
SSC Member	Issue	Reason
None.		

A. Call to Order

Dr. Dan Holland called the meeting to order at 0800. Mr. Merrick Burden briefed the Scientific and Statistical Committee (SSC) on their tasks at this meeting.

G. Groundfish Management

7. Stock Assessment Check-In and Plan – Final Action

The SSC received a presentation from Dr. Jim Hastie (Northwest Fisheries Science Center) regarding the scheduling of STAR panels for species identified at the June Council meeting for assessment in 2023, ageing priorities, and whether there is a need to assess copper rockfish in Oregon and Washington given decisions regarding stock definitions under [Agenda Item G.5](#) of this meeting. Petrale sole and canary rockfish ageing will take substantial time and the SSC recommends review of these assessments at the last STAR panel to allow more time to complete the age readings. Ideally, the review of length-based assessments for shortspine thornyhead and rex sole would take place at the first STAR panel to allow University of Washington students to participate in the completion of the assessments during the preceding quarter.

The SSC previously provided guidance at the November 2021 Council meeting to delineate status determinations for copper rockfish at the state boundaries ([Agenda Item E.2.a, Supplemental SSC Report 1, November 2021](#)). There are no additional genetic or other pertinent data sources to support an alternative stratification. Stratification at 40°10' N. lat. would not align with state-specific data sources. In addition, stratification at 40°10' N. lat. would require a new assessment for 40°10' N. lat. through the California-Oregon border, posing a trade-off given limited assessment capacity, and prohibiting assessment of rex sole. Thus, the SSC continues to recommend stratification of status determination of copper rockfish at state boundaries.

Generally, the SSC prefers to assess all areas for a species in a single cycle to take advantage of efficiencies, make use of parameter estimates that can be shared between areas, and make consistent assumptions ([Agenda Item F.3.a, Supplemental SSC Report 1, June 2022](#)). However, given the lack of additional data to inform new Oregon and Washington copper rockfish assessments in 2023 and the recency of assessment results from the previous biennium, the SSC would endorse use of the 2021 assessment results for status determination if a coastwide perspective on status is needed. Forgoing length-based data-moderate assessments for shortspine thornyhead or rex sole to conduct further assessments for copper rockfish in Oregon and

Washington is undesirable because shortspine thornyhead and rex sole have not been assessed since 2013.

SSC Notes:

The 40°10' N. lat. boundary for copper rockfish would necessitate new assessments for Oregon as well as CA waters to the south, requiring additional assessment staffing.

Stratification of the copper rockfish assessment at 40°10' N. lat. would not align with state-specific data sources such as the California Collaborative Fisheries Research Program (CCFRP), ROV surveys, and fishery-dependent data sources that are unavailable or differ between states.

4. Methodology Review – Preliminary Fishery Impact Model Topics and Final Assessment Methodologies

The Scientific and Statistical Committee (SSC) reviewed the meeting report from the SSC Groundfish Subcommittee's June 2022 workshop on Methods for Standardizing Hook-and-Line Survey Indices of Abundance and Methodology Review of the Species Distribution Model in Template Model Builder (sdmTMB) software. The SSC recommends adopting the Subcommittee report and endorses the use of the sdmTMB software for index standardization in 2023 assessments and beyond. The sdmTMB software performed as expected with results similar to the previously endorsed Vector Autoregressive Spatio-Temporal (VAST) software used for index standardization. The SSC recommends that the 2023 Accepted Practices Guidelines for Stock Assessments, which is a compilation of guidelines for groundfish and coastal pelagic species stock assessment scientists, be updated with the recommended practices for standardizing hook-and-line survey data in the workshop report. Finally, the Council Research Priorities should be updated to reflect the future research recommendations developed during the workshop.

The Groundfish Management Team has adjusted the sablefish daily trip limit model used for inseason management to address problems with model predictions. The SSC supports use of the adjusted model for actions this year, but recommends the model go through a formal review next year.

SSC Notes:

VAST and sdmTMB software differ in the use of numbers or biomass. Based on first principles, modeling numbers may be preferable. It would be good to explore the ability to build functionality into each of these software packages to permit modeling either numbers or biomass in each modeling tool.

C. Administrative Matters (*continued*)

1. Research and Data Needs

The Scientific and Statistical Committee (SSC) was updated by Ms. Meisha Key (Key Coaching and Development) on the ongoing construction of the Research and Data Needs Database. The SSC appreciates the hard work of Ms. Key and the development team. This database offers many improvements over the current report.

Some of the key tasks for the SSC at this stage are (1) to determine processes for adding projects and setting the SSC ranking, (2) establishing definitions for the ranking categories, and (3) dealing with duplicates and overlapping projects. The SSC intends to finish these tasks before the planned 2023 update to the list of Research and Data Needs.

The SSC proposes that a jot form, or similar interface, with fields that mirror the format of the database be developed for interested parties to submit project proposals to the Council and SSC. Future discussions can determine how these submissions are reviewed. A process for ranking projects needs to be developed and discussion of this likely needs to be had at both the SSC and the SSC subcommittee level.

The SSC notes that the ranking of high priority and/or high urgent priority quickly becomes watered down if it is overused. The SSC will consider the ranking system used by the North Pacific Fishery Management Council ([Research Priorities Terms Definitions \(current\).pdf \(npfmc.org\)](https://www.npfmc.org)) and develop suggested definitions or guidelines for SSC ranking. High and/or urgent rankings were noted by many SSC members as being helpful for procuring funding for new and ongoing projects and the SSC considers it important to explore ways to communicate which ongoing projects are critical for fisheries management in addition to encouraging needed new projects.

Ms. Key has cataloged current Research and Data Needs projects that appear to be duplicates of, or are closely related to, other entries. The SSC agreed that the appropriate SSC subcommittees could review these related projects before the end of the year and either combine duplicates into one entry or add explanations to differentiate between apparently similar or overlapping projects.

SSC Notes:

New projects being routed, in a uniform way, through the SSC should help reduce duplicates in the future.

Advisory bodies will now have input on prioritizing within their FMP and the Fishery Ecosystem Plan.

Does the SSC prefer the “year” field representing the year the item was added or the last time the project was reviewed/ranked?

Meisha has an extremely helpful spreadsheet of duplicates/overlapping entries that can be shared with the subcommittees to expedite dealing with current duplicate projects. There is also room in the “Status” tab to make notes about how something does or does not overlap with other project

entries. No objections were raised to dealing with these by the end of the calendar year. Meisha could do a training video for SSC members before November.

Questions were raised about how and how many people use this document. NPFMC had lots of discussions of how to concisely signal highest priority projects and how to disseminate information. This is something we could work on as well.

The SSC should consider adding an “ongoing” status option.

D. Salmon Management

1. Methodology Review - Final Topic Selection and Update on Model Improvements

Dr. Michael O’Farrell (Salmon Technical Team, STT) and Mr. Jon Carey (STT) briefed the Scientific and Statistical Committee (SSC) on five proposed topics for the 2022 Salmon Methodology Review scheduled for October 12-13, 2022. The five topics listed in the Situation Summary are anticipated to be ready for review and the SSC supports reviewing all five. The topics and parties responsible for providing documentation are:

1. Technical review of the updates associated with ‘Round 7.1.1’ of the Fishery Regulation Assessment Model (FRAM) base period as they relate to modeled abundances of Chinook salmon stocks used in determining the southern resident killer whale (SRKW) Chinook salmon abundance threshold. This review will be informed by a document that summarizes the changes to the FRAM that impact the SRKW Chinook salmon abundance threshold and will be led by the Model Evaluation Workgroup (MEW) with support from the Washington Department of Fish and Wildlife (WDFW), Northwest Indian Fisheries Commission (NWIFC), and National Oceanic and Atmospheric Administration (NOAA).
2. Technical review of the updates to Chinook salmon ocean distribution models that derive from two publications (Shelton et al. 2019, 2021) and are used to apportion the modeled abundance of Chinook salmon stocks among ocean regions. This review will be informed by an additional document that summarizes changes between the 2019 and 2021 models that impact modeled Chinook salmon stock apportionment, and this document will be prepared by the Northwest Fisheries Science Center.
3. Discussion of whether the Sacramento Index forecast should be expressed as a mean or median. This review will evaluate a document that discusses expected type and magnitude of errors and management performance associated with expressing this point estimate as a mean or median. This document will be prepared by the Southwest Fisheries Science Center.
4. Review of the basis behind the Sacramento River Fall Chinook conservation objective. This review will be based on a document that reviews the literature used to develop the Sacramento River Fall Chinook conservation objective and the SSC recommends that it should incorporate information from more recent studies as appropriate. Document preparation will be led by the Southwest Fisheries Science Center.
5. FRAM technical detail documentation. This review will consist of an update of the online-based documentation of the FRAM model reviewed in previous cycles and will be led by the MEW with support from WDFW, NWIFC, and NOAA.

Materials submitted for review should be technically sound, comprehensive, clearly documented, and identified by author. Materials to be reviewed should be submitted no later than two weeks prior to the review. If this deadline cannot be met, it is the responsibility of the author to contact Robin Ehlke – Salmon Staff Officer, the SSC Salmon Subcommittee Chair, and the STT Chair prior to the deadline, so appropriate arrangements, rescheduling, and cancellations can be made in a timely and cost-effective manner. The SSC plans to review reports on these topics at the November 2022 Council meeting.

SSC Notes:

Responsible parties identified for some items differ from those in the Briefing Book because, although members of the SSC are responsible for some documents, they do so through their affiliation with other organizations and will be recused from review where appropriate.

G. Groundfish Management (*continued*)

5. Stock Definitions Update

The Scientific and Statistical Committee (SSC) discussed scoping for Amendment 31 to the Pacific Coast Groundfish Fishery Management Plan, as well as the documents prepared for this agenda item (Agenda Item G.5, Attachments [1](#) and [2](#)). As in the SSC’s June 2022 statement on this agenda item, defining stocks through an amendment to the Groundfish Fishery Management Plan (FMP) involves a combination of scientific and policy considerations, and the SSC limited discussion to scientific considerations only.

The SSC continues to endorse a multi-phase approach for establishing stock definitions, recognizing the need for decisions in the relatively near future for species assessed in 2021 and those that are planned for assessment in 2023. The decision roadmap provided in Agenda Item G.5, [Attachment 1](#) seems adequately defined with respect to the need for Amendment 31, given that an FMP amendment is necessary to implement previous SSC recommendations regarding stock assessment results and status determinations. The SSC also agrees that Table 1 in [Attachment 1](#) provides an appropriate starting point for a number of additional species in the FMP that is consistent with historical management approaches and presumed stock structure assumptions. The SSC recognizes that some modifications to these stock definitions may be appropriate (such as the Pacific ocean perch area designation discussed in the document) as some area definitions may be management or assessment artifacts.

The SSC recognizes that while it is unlikely that new data or information will be available to inform stock structure decisions for these (and other) stocks in the near term, there is likely benefit in improved organization and interpretation of existing insights and data to support upcoming decisions. This would include a synthesis of approaches taken by other Regional Fishery Management Councils in addressing these questions. Consequently, the SSC continues to be supportive of a working group or team to compile and synthesize such information.

With respect to the proposed timeline for a preferred preliminary alternative (PPA) for copper and black rockfish stock structure in November, the SSC notes that this provides very little time for any formal or informal effort to synthesize information to support these decisions. The SSC continues to recommend that stock assessments be conducted as consistently as possible with

likely or tentative stock definitions suggested by stock assessment analysts (recognizing the benefits of stratifying assessments at finer-scale spatial areas when appropriate). Past SSC recommendations have generally been consistent with the recognition that nearshore rockfish are more likely to have finer-scale stock structure than shelf or slope groundfish species. Consequently, the SSC concurs with the recommendations of assessment analysts with respect to stock boundaries for copper and black rockfish, who have discussed the available information to inform stock structure in the relevant assessment documents. Analysts have subsequently structured these and many other nearshore rockfish assessments around state boundaries and indicated the likelihood of at least some level of stock structure among those areas. The briefing materials for this agenda item did not suggest any basis for reconsideration of previous recommendations regarding likely or plausible stock structure of nearshore rockfish.

SSC Notes:

With respect to either a formal or informal working group to provide a better synthesis of information, the science centers have identified staff to help Council staff prepare additional background materials on this issue. The SSC noted that staff currently committed to this effort have ecological expertise but are less appropriately equipped to address economic or social factors, and Council staff recognized a need to seek complementary expertise to inform such questions.

With respect to redefining overfishing criteria in the FMP for stocks within a complex (Item 5 in [Attachment 1](#)), there was recognition that a change in how OFLs are defined for species that have been subject to category 1 or 2 stock assessments is worth additional discussion. However, it was also suggested that more analysis of National Standard 3 considerations and the role that the species complexes play with respect to management in this fishery would be helpful for informing future discussions on this issue.

With respect to stock structure and past copper and black rockfish assessments, note that the SSC recommendation was to pool the model results for Oregon and Washington for a northern region, and to pool the assessment results north and south of Point Conception, CA for a southern (California) region. The SSC also recommended that harvest levels should be spatially allocated within those areas proportional to relative biomass to reduce risk owing to stock structure uncertainty, particularly for copper rockfish off California.

H. Ecosystem Management

1. Fishery Ecosystem Plan Initiatives Appendix and New Initiative

The Scientific and Statistical Committee (SSC) received a presentation from Dr. Kit Dahl (PFMC Staff) on the Fishery Ecosystem Plan (FEP) Initiatives and draft updates to the FEP Appendix proposed by the Ecosystem Workgroup. The SSC previously reviewed the FEP Initiatives in [March 2022](#). The updated Appendix has been revised to address input provided by the Council and its advisory bodies. It also includes a new initiative, “Climate-Informed Fisheries Management,” which was recommended by several advisory bodies. In general, the SSC is supportive of the updated FEP Appendix.

The SSC notes that the work proposed in initiative 2.4, “Cross-FMP Essential Fish Habitat (EFH) Initiative,” would likely need to be conducted in concert with state fisheries management agencies as EFH extends beyond the Federal jurisdiction. The SSC’s previous comments from March 2022 also remain relevant for the updated FEP Appendix. For example, the work described in proposed initiative 2.2, “Science Policy and Planning for Understanding the Effects of Oceanographic Conditions and Recruitment on Council-Managed Finfish Species,” may be more appropriate once better oceanographic models and data sources become available. Proposed initiative 2.8, “Assess Flexibility in Fisheries Management Process Initiative,” should consider ways flexibility may have both negative and positive effects on fishery stakeholders.

The newly proposed initiative 2.10 combines elements from initiative 2.1, “Ecosystem and Climate Information for Species, Fisheries, and Fishery Management Plans (FMPs),” initiative 2.6, “Supporting Fishery and Fishing Community Resilience Initiative,” and initiative 2.8, “Assess Flexibility in Fisheries Management Process Initiative.” The SSC notes that the combined initiative would be a significant undertaking and take several years to complete. Given the multi-phased nature of the proposed work, it might make more sense to conduct the work sequentially, starting with elements from initiative 2.1 rather than committing to the entirety of initiative 2.10.

SSC Administrative Matters (*continued*)

9. Review of Coastal Pelagic Species Stock Assessment Terms of Reference

The SSC reviewed the revised Terms of Reference (TOR) for Coastal Pelagic Species (CPS) stock assessments. The SSC agrees that their previous comments ([June 2022, D.2.a, Supplemental SSC Report 1](#)) have been sufficiently addressed.

The SSC notes that recent practices with respect to STAR Panelist recusals and changing sigma over the course of projections have not been entirely consistent with the revised TOR. Consistency should be strived for in the future. The SSC continues to see value in developing a TOR for CPS rebuilding analyses.

The SSC also notes that salmon do not have a rebuilding analysis TOR either, and the SSC and salmon advisory bodies may wish to discuss the value of developing such a TOR in the future.

C. Administrative Matters (*continued*)

3. Council Meeting and Process Efficiencies

The Scientific and Statistical Committee (SSC) received a presentation from John DeVore (Council staff) on the “Council Efficiencies and Effectiveness White Paper.” The SSC appreciates the effort and thoughtfulness from Council staff in developing this document.

The SSC discussed the contents of the white paper and the SSC’s experiences with virtual meetings in general. The SSC supports having the option to read statements to the Council virtually, which allows subject matter experts to read statements and other SSC members to be present to answer questions. The SSC supports having some of its regular meetings be entirely virtual. Continued use of virtual meetings for SSC Subcommittee meetings and workshops and other reviews also has

advantages, although in-person meetings may be preferable in many cases. For in-person meetings, the SSC supports enabling hybrid (virtual/in-person) meetings, with most SSC members meeting in-person with the option for other members to participate virtually if they are unable to travel. Presentations to the SSC and public comment could also be virtual.

Future iterations of the white paper could include an estimate of the financial tradeoffs between in-person and hybrid/virtual meetings. The white paper mentions additional costs (for equipment and potential staff time) for virtual meetings, but these, to some degree, would be offset by reduced travel costs.

The SSC's discussion recognized both the benefits and costs of in-person and virtual meetings. In-person meetings allow for easier, more meaningful interactions between participants. The SSC notes the transition to virtual-only for its meetings was relatively easy, in part because of the good relationships between members that had been built during prior in-person meetings. Some SSC members noted that focused participation and coordination between the Council and advisory bodies was better during in-person meetings. Side conversations are an example of meaningful, useful interaction that occurs in-person. However, such interactions may have some downside issues because they reduce transparency and could exclude non-participants from discussions that may affect decision-making.

Virtual meetings allow for greater participation and permit greater inclusivity, since participants need not travel to meetings. The SSC notes that the way virtual or hybrid meetings are conducted affects their effectiveness, and future work on the white paper could include some investigation of best practices for conducting these meetings.

The SSC is concerned that producing an SSC report and an additional summary for reading to the Council could reduce the precision and quality of information presented to the Council and increase workload.

The SSC discussed the idea of meeting prior to, rather than concurrent with, Council meetings. The SSC notes that other Councils do this. However, if this option is pursued, this will affect the timelines for Council staff, science centers, and others presenting work to the SSC, as this work would need to be available for review well before the briefing book deadline.

SSC Notes:

Bigger meetings with disparate groups are better suited for being virtual (e.g., workshops). We want input from lots of parties and being remote improves inclusion.

Having regular hybrid or virtual meetings maintains the Council's capacity to transition back to all-virtual meetings in the future in case of some unforeseen event.

Future workload items could include whether future SSC meetings would be virtual or hybrid. For example, two to four (out of five) SSC meetings could be primarily in-person (with virtual participation options) and one to three meetings could be entirely virtual.

The SSC notes that we have had difficulty staffing stock assessment review (STAR) panels. Allowing panel members to participate virtually may expand the pool of potential candidates.

STAR panels may not function well as hybrid meetings for all participants. STAR panels may be better as either virtual or in-person (no hybrid option for Panelists and STAT leads).

Having a statement and summary makes a single person responsible for determining what to highlight. Things may inadvertently get glossed over. Also, sometimes we spend a painful amount of time choosing one specific word in a statement.

If the SSC meets non-concurrently with the Council, then giving statements virtually is preferred.

8. Future Council Meeting Agenda and Workload Planning

The Scientific and Statistical Committee (SSC) discussed workload planning and has the following updates to our June 2022 statement under this agenda item.

The SSC recommends holding its November meeting in-person November 2-3, 2022.

The SSC Ecosystem Subcommittee meeting with the California Current Integrated Ecosystem Assessment (CCIEA) team to review additions to the Integrated Ecosystem Assessment (IEA) report will be held as a webinar on September 16. The SSC Salmon Subcommittee, the Salmon Technical Team (STT), the Salmon Advisory Subpanel (SAS), the Ecosystem Workgroup (EWG), and the Ecosystem Advisory Subpanel (EAS) were invited to participate.

The Salmon Methodology Review will be held as a webinar October 12-13, 2022 with participation by the SSC Salmon Subcommittee, the STT, and the Model Evaluation Workgroup (MEW).

The SSC recommends a Pacific Sardine stock structure workshop November 15-17, 2022. The Coastal Pelagic Species (CPS) Subcommittee would participate in this workshop along with Science Center assessment and survey staff and the CPS Management Team and Advisory Subpanel (CPSMT and CPSAS). Whether this meeting will be held in person or as a webinar has yet to be determined.

A Pacific Fishery Management Council (Council)-sponsored methodology review with the goal of improving estimates of the abundance of the Northern Subpopulation of Pacific Sardine is proposed for Winter of 2023 with participation from the CPS Subcommittee along with Science Center assessment and survey staff and the CPSMT and CPSAS. The meeting may be held in person or as webinar.

The Western Groundfish Conference will be held April 23-29, 2023 in Juneau, Alaska. Several SSC members are likely to attend.

The SSC Groundfish Subcommittee is planning several meetings and workshops over the next several months.

- The SSC Groundfish Subcommittee will review the Oregon Department of Fish and Wildlife's proposed acoustic/visual survey methodology for semi-pelagic rockfish in a webinar to be held September 27-30, 2022 with the participation of a Center of Independent Experts scientist with expertise on acoustic abundance estimation methods. A review of Washington's hook-and-line surveys

will also occur at this meeting. The review will focus on survey designs and future application in stock assessments.

- The SSC proposes a Groundfish Subcommittee meeting to explore approaches to model large closed areas, catch estimation, and other regulation changes in stock assessments to be held as a webinar in December 2022 or January 2023 with participation from Science Center assessment staff and the Groundfish Management Team (GMT) and Groundfish Advisory Subpanel (GAP).
- The SSC Groundfish Subcommittee recommends scheduling a workshop on using ROV data in stock assessments as a webinar in January 2023 with an exact date to be determined with participation from Science Center Assessment Staff.
- The SSC Groundfish Subcommittee had previously proposed a workshop to discuss alternative harvest control rules for spiny dogfish but recommends postponing that workshop until 2024 due to lack of data and capacity to make progress on this topic prior to the 2023 stock assessment cycle.

SSC Notes:

Workload for SSC Groundfish Subcommittee is becoming excessive and there is a need to maintain focus on reviews of science. Making meetings virtual should not be an excuse to increase meetings or meeting length.

Consider a workshop for exploration of ageing spiny dogfish. This may be proposed as a methodology review topic in September 2023.

A methodology review to consider the use of ages from the spectroscopy method in stock assessments could be undertaken as a new methodology review topic in September 2023 to be undertaken in winter 2023-2024. (This is also from the ageing coordination meeting report.)

Proposed Workshops and SSC Subcommittee Meetings for 2022 and Beyond

Workshop/Meeting		Potential Dates	Sponsor/ Tentative Location	SSC Reps.	Additional Reviewers	AB Reps.	Council Staff
1	Ecosystem Subcommittee/CCIEA Team Meeting	Sept 16, 2022	Council/Webinar	Ecosystem and Salmon Subcommittee Members	CCIEA Team	EWG EAS STT SAS	DeVore Dahl Ehlke
2	Methodology Review for the ODFW Acoustic/Visual Survey, Proposed Workshop to Develop Methods for Constructing Abundance Indices Based on WA Hook-and-line Surveys	Sept 27-30, 2022	Council/Webinar	Groundfish Subcommittee Members (Budrick & Hamel - co-chairs)	CIE (Rose), Science Center Assessment Staff	GMT GAP	DeVore
3	Salmon Methodology Review	Oct 12-13, 2022	Council/Webinar	Salmon Subcommittee Members	None	STT MEW	Ehlke
4	Pacific Sardine Stock Structure Workshop	Nov 15-17, 2022	SWFSC/TBD	CPS Subcommittee Members	Science Center Assessment/ Survey Staff	CPSMT CPSAS	Doerpinghaus

Proposed Workshops and SSC Subcommittee Meetings for 2022 and Beyond

	Workshop/Meeting	Potential Dates	Sponsor/ Tentative Location	SSC Reps.	Additional Reviewers	AB Reps.	Council Staff
5	Proposed Groundfish Subcommittee Meeting to Explore Approaches to Deal with Large Closed Areas, Catch Estimation, and Other Regulation Changes in Stock Assessments/Catch Estimation Meeting	Dec 2022 or Jan 2023 TBD	Council/Webinar	Groundfish Subcommittee Members (Budrick & Field - co-chairs)	Science Center Assessment Staff	GMT GAP	TBD
6	ROV Survey and Workshop for Using ROV Data in Stock Assessments	Jan 2023 TBD	Council/Webinar	Groundfish Subcommittee Members (chair TBD)	Science Center Assessment Staff	GMT GAP	TBD
7	Western Groundfish Conference	Apr 23-29, 2023	AFSC/Juneau	NA	NA	NA	NA
8	Methodology Review on Abundance and Catch Estimation of the Northern Subpopulation of Pacific Sardine	Winter 2023	Council/TBD	CPS Subcommittee Members (Punt - chair)	Science Center Assessment/ Survey Staff	CPSMT CPSAS	Doerpinghaus
9	Proposed Workshop to Develop Alternative Harvest Control Rules for Spiny Dogfish	2024 TBD	Council/Webinar	Groundfish Subcommittee Members	TBD	GMT GAP	TBD

SSC Subcommittee Assignments

Salmon	Groundfish	Coastal Pelagic Species	Highly Migratory Species	Economics	Ecosystem-Based Management
Alan Byrne	John Budrick	André Punt	John Field	Cameron Speir	Kristin Marshall
John Budrick	John Field	John Budrick	Dan Holland	Dan Holland	John Field
Owen Hamel	Melissa Haltuch	Alan Byrne	Kristin Marshall	André Punt	Melissa Haltuch
Galen Johnson	Owen Hamel	John Field	André Punt	Matthew Reimer	Dan Holland
Will Satterthwaite	Kristin Marshall	Owen Hamel	Matthew Reimer		Galen Johnson
Jason Schaffler	André Punt	Will Satterthwaite			André Punt
Ole Shelton	Jason Schaffler	Tien-Shui Tsou			Matthew Reimer
Cameron Speir	Tien-Shui Tsou				Will Satterthwaite
Tien-Shui Tsou					Ole Shelton
					Cameron Speir

Bold denotes Subcommittee Chairperson

ADJOURN