Scientific and Statistical Committee

Pacific Fishery Management Council Online Meeting

April 9-10, 2025

Members in Attendance

- Dr. Cheryl Barnes, Oregon State University and Oregon Department of Fish and Wildlife, Newport, OR
- Dr. John Budrick, California Department of Fish and Wildlife, San Carlos, CA
- Dr. Tim Copeland, 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. Tommy Moore, Northwest Indian Fisheries Commission, Forks, WA
- Dr. André Punt, University of Washington, Seattle, WA
- Dr. Matthew Reimer, University of California Davis, Davis, CA
- 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. Tien-Shui Tsou, Washington Department of Fish and Wildlife, Olympia, WA

Members Absent

None

SSC Recusals for the April 2025 Meeting								
SSC Member	Issue	Reason						
Dr. André Punt	· •	Dr. Punt serves as an academic graduate advisor of a stock assessment 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 2025 SSC agenda was approved. Several former SSC members were inadvertently noted in the attendance list of the March 2025 SSC Minutes draft, and several minor edits to italic notes were made prior to the minutes being adopted as final. The April 2025 briefing book version of the March 2025 SSC Minutes will be updated to reflect SSC approved changes, and the final document will be posted to the <u>SSC minutes archive website</u>.

Subcommittee assignments were reviewed, and Dr. Tim Copeland will serve on the Salmon Subcommittee and the Ecosystem-Based Management Subcommittee.

Open discussion included the opportunity to provide any potential themes or topics from the PFMC SSC to consider in planning the next Council Coordination Committee's (CCC) Scientific Coordination Subcommittee meeting (SCS9). None were provided at this time.

Per suggestion in March 2024, a public comment period was conducted at the beginning of each day to allow for relevant public comments to be made and considered prior to the SSC taking up an Agenda Item.

- H. Administrative Matters
- Membership Appointments and Council Operating Procedures

 Membership Appointments (SSC Closed Session)
- D. Salmon Management
- 4. Methodology Review Preliminary Topic Selection

The Scientific and Statistical Committee (SSC) met with members of the Salmon Technical Team (STT) to discuss potential topics to be reviewed by the SSC Salmon Subcommittee in fall 2025. Will Satterthwaite (Southwest Fisheries Science Center) briefed the SSC and STT on the review topics put forward by the Sacramento River Fall Chinook working group (SRWG) (Agenda Item D.4.a, <u>SRWG Report 1</u>):

1. Derivation of natural-area S_{MSY} for Sacramento River Fall Chinook;

- 2. Methods for evaluating consequences of changes in allowable exploitation rates, evaluating forecast performance, and potentially adjusting forecasts for bias and/or uncertainty buffers; and
- 3. Methods for deriving a total (natural areas plus hatchery) escapement objective based on consideration of natural production and hatchery needs.

The SSC supports moving forward with review of the topics proposed by the SRWG. These topics all have materials ready for review this year, with analysts available and able to engage in the Council process, and there are a reasonable number of topics for review this year.

The SSC also supports reviewing the Oregon Production Index Hatchery (OPIH) forecast methodology, including but not limited to the modifications made in March 2025. The SSC reiterates our previously stated position that the OPIH team should explore breaking the forecast into key component stocks, including natural origin stocks, and should clearly and completely document how the aggregate OPIH forecast is broken into the components used by the STT and modelers (e.g. Fishery Regulation Assessment Model).

The SSC is also willing to review other salmon methodology topics as requested by the Council.

SSC Notes

<u>OPIH Topic</u>

Hatchery and natural origin salmon are subjected to very different freshwater environments and therefore forecasts should not be expected to be influenced by the same environmental drivers. It is also unclear why natural origin salmon returns would be related to the number of hatchery jacks that returned the previous year.

Documentation should clearly and completely outline the steps for how the output is incorporated into the Fishery Regulation Assessment Model (FRAM) and for anyone familiar with FRAM to take the forecast output and incorporate it into FRAM.

G. Coastal Pelagic Species Management

5. Science and Management Priorities

The Scientific and Statistical Committee (SSC) discussed the science and management priorities needed to support the management of U.S. West Coast Coastal Pelagic Species (CPS) fisheries. The SSC received a presentation from Katrina Bernaus (Council staff) on a white paper (Agenda Item G.5 Attachment 1) that provides a list of science and management topics for CPS fisheries that the Council can reference in establishing workload priorities. The SSC generally agrees with the topics identified in the white paper and offers the following comments and recommendations on high-priority items and implementation considerations.

Stock structure for Pacific sardine

The reevaluation of the stock structure is the highest priority for Pacific sardine. Recent studies document limited evidence of genetic differentiation between the putative northern and southern subpopulations (NSP and SSP, respectively), raising questions about the current management unit. Clarifying the definition of the "stock" (e.g., biological versus management) is critical to aligning scientific understanding with regulatory objectives under the CPS fishery management plan (FMP).

The SSC emphasizes the need to prioritize stock definitions to enable further work on E_{MSY} and the DISTRIBUTION term in the sardine harvest control rule (HCR), as all three components are interdependent. Any change in the stock definition would necessitate revisions to the E_{MSY} formulation and assessment frameworks. As such, the SSC recommends approaching these issues as a package.

An increasing proportion of the U.S. sardine catch, particularly in southern California waters, has been assigned to the SSP based on habitat models. However, the SSP is not currently included in the CPS FMP. As a result, catches of the SSP are counted against the allowable catch for the NSP, but the biomass of the SSP is not included in the NSP assessment. Calculating a harvest limit based on an assumed stock unit but applying it to a different stock unit is scientifically inconsistent and incompatible with risk neutrality. If the current stock definitions are retained, the Council should consider identifying management approaches for the SSP given its inferred increased presence in U.S. waters.

While stock structure is a critical issue for Pacific sardine, the SSC notes that similar concerns are not currently as pressing for other CPS, so other issues should be key priorities for those species.

Use of *E*_{MSY} in harvest control rules

Re-examining the exploitation rate corresponding to maximum sustainable yield (E_{MSY}) for Pacific sardine based on an updated analysis of the relationship between environmental conditions and recruitment is a high priority. This should be done in coordination with the stock structure and DISTRIBUTION term re-evaluation. Current and alternative E_{MSY} formulations, including environment-dependent and fixed values, can be evaluated using a Management Strategy Evaluation (MSE) with an operating model that incorporates an updated, statistically-informed relationship between environmental conditions and recruitment.

DISTRIBUTION term in CPS HCRs

In coordination with a re-evaluation of stock structure and E_{MSY} , a framework-based approach should be developed for estimating the DISTRIBUTION term rather than relying on fixed values. The DISTRIBUTION term is used in the HCR to scale OFL/ABC to the proportion of the stock estimated to be within U.S. waters. Frameworking allows flexibility to incorporate new information as it becomes available and could better reflect dynamic shifts in species distributions due to environmental variability. This recommendation applies to Pacific sardine and other CPS such as anchovy.

Managing Annual Opportunity

The SSC suggests two additional topics under Managing Annual Opportunity.

More responsive HCRs

A more responsive and data-informed approach for setting OFLs in the years between stock assessments should be developed. The SSC has concerns about the use of catch-only projections to set OFLs for short-lived species with highly variable recruitment and biomass dynamics. Catch-only projections for species like Pacific sardine and Pacific mackerel rely much more on model-inferred than on data-based values for recruitment compared to groundfish or other long-lived species. For example, the July 2025 and July 2026 biomass estimates from the recent Pacific mackerel catch-only update are 94% and 98% informed by the stock-recruitment relationship, respectively. Alternative approaches could include the use of HCRs that rely on survey data that better capture current conditions. The approach developed for the central subpopulation of northern anchovy (CSNA) is an example of the integration of periodic assessments and survey data for updating the OFL and ABC.

Review of OFLs for other CPS

The SSC recommends that it formally reviews OFLs for all CPS on a regular (but not necessarily annual) basis.

General Comments on Prioritization Process

The SSC supports the proposed recurring process for reviewing CPS science and management priorities in November during even years, consistent with the stock assessment prioritization cycle. This would provide a structured approach for the Council and advisory bodies to revisit CPS science and management priorities and adjust workplans in response to new information.

Although these topics are technical in nature, decisions about changes to HCRs and stock structure, for example, will require broader input beyond the SSC. The SSC should continue to review any scientific inputs that support Council decision-making on these issues.

G. Coastal Pelagic Species Management

4. Pacific Mackerel Catch-Only Update: Specifications and Management Measures for 2025-2027 – Final

Alex Jensen (Southwest Fishery Science Center) presented results for the 2025 catch-only projection of the 2023 Pacific mackerel benchmark assessment (<u>Agenda Item G.4 Attachment 1</u>). The catch-only projection follows the methods of the 2023 benchmark but is based on the most recent version of Stock Synthesis. Bridging analyses found consistency among model outputs. Updated catch data from 2008-2023 and catch data for 2024 were used in the catch-only projection, and forecasts began in 2024. The resulting model provided forecasts of biomass for age 1+ fish for July 2025 and July 2026.

The proportion of summary biomass in the catch-only projection informed solely by the stockrecruitment relationship, rather than by information provided by the Acoustic Trawl survey, is 94% for July 2025 and 98% for July 2026. Incorporation of survey and composition data in an update assessment would better inform estimates of recent recruitment, although this is outside the Terms of Reference for a catch-only projection. A sensitivity analysis showed that setting recruitment beyond 2022 equal to that estimated for recent years resulted in relatively small differences.

The SSC found an error in the calculation of the Tier 1 ABC buffers presented in Table 4 of <u>Attachment 1</u>, which was corrected in the presentation to the SSC by Alex Jensen. The corrected table is provided below.

The SSC endorses the catch-only projection as the best scientific information available for use in management. However, using recruitment values from the stock-recruitment curve instead of full demographic information from monitoring data leads to substantially greater uncertainty than is common for catch-only projections used for Council decision-making. The SSC assigned the catch-only projection to Category 2(d), but noted that the level of uncertainty may be more comparable to that of Category 3. The SSC endorses the Overfishing Limits (OFLs) of 12,965 mt for 2025-26 and 14,270 mt for 2026-27, and the associated Age 1+ biomasses on 1 July 2025 and 2026 of 61,737 mt and 67,954 mt. The Harvest Guideline (HG) depends on the catch assumed and the buffer selected by the Council because a choice of the P* less than 0.4 can result in an ABC value below the current HG. The final Acceptable Biological Catches (ABCs) depend on the Council's risk tolerance as reflected in the choice of P*. The 2026-27 overfishing limit could be recalculated if the ABC for 2025-26 is less than the HG for that year.

Harvest Control Rule Formulas									
$OFL = BIOMASS * E_{MSY} * DISTRIBUTION$									
$ABC_{P-star} = BIOMASS * B$	$ABC_{P-star} = BIOMASS * BUFFER_{P-star} * E_{MSY} * DISTRIBUTION$								
HG = (BIOMASS – CUTOFF) * FRACTION * DISTRIBUTION									
Harvest Guideline Parameters									
BIOMASS (ages 1+, mt) 61,737									
P-star	0.45	0.4	0.35	0.3	0.25	0.2	0.15		
ABC Buffer _{Tier 1}	0.8469	0.7153	0.6008	0.4998	0.4099	0.3286	0.2540		
ABC Buffer _{Tier 2}	0.7778	0.6025	0.4627	0.3504	0.2595	0.1858	0.1258		
ABC Buffer _{Tier 3}	0.7778	0.6025	0.4627	0.3504	0.2595	0.1858	0.1258		
EMSY (FRACTION)	0.30								
CUTOFF (mt)	18,200								
DISTRIBUTION (U.S.)	0.70								
	Harve	est Contr	ol Rule V	alues					
OFL =	12,965								
$ABC_{Tier 1} =$	10,980	9,274	7,789	6,480	5,314	4,260	3,293		
$ABC_{Tier 2} =$	10,084	7,811	5,999	4,543	3,364	2,409	1,631		
$ABC_{Tier 3} =$	10,084	7,811	5,999	4,543	3,364	2,409	1,631		
HG =	9,143								

a) Fishing year 2025-2026

b) Fishing year 2026

Harvest Guideline Parameters								
BIOMASS (ages 1+, mt)	67,954							
P-star	0.45	0.4	0.35	0.3	0.25	0.2	0.15	
ABC Buffer _{Tier 1}	0.8206	0.6712	0.5453	0.4381	0.3459	0.2659	0.1957	
ABC Buffer _{Tier 2}	0.7778	0.6025	0.4627	0.3504	0.2595	0.1858	0.1258	
ABC Buffer _{Tier 3}	0.7778	0.6025	0.4627	0.3504	0.2595	0.1858	0.1258	
EMSY (FRACTION)	0.30							
CUTOFF (mt)	18,200							
DISTRIBUTION (U.S.)	0.70							
	Harvest	Control 1	Rule Val	ues (MT))			
OFL =	14,270							
$ABC_{Tier 1} =$	11,710	9,578	7,782	6,252	4,936	3,794	2,793	
$ABC_{Tier 2} =$	11,099	8,598	6,603	5,000	3,703	2,651	1,795	
$ABC_{Tier 3} =$	11,099	8,598	6,603	5,000	3,703	2,651	1,795	
HG =	10,448							

SSC Notes

- More consideration should be given to accounting for unidentified mackerel from PacFIN codes in the next assessment. Only catch identified as Pacific mackerel was included in the catch estimates. Apportionment of unidentified CPS catch and attempts to use the result in the catch estimates was not undertaken since the magnitude of unidentified catch primarily from Washington was very limited and a sensitivity analysis including them did not significantly alter the results.
- The HG for 2025-26 depends on the catch assumed and the buffer selected by the Council, thus the choice of the P* less than 0.4 can result in a value below the current HG while the HG for 2026-27 depends on the decision made by the Council regarding the 2025-26 HG.
- The SSC received oral public comment from Oceana articulating that the biomass observations are below the cutoff threshold, so the stock would be considered overfished. However, the assessment accounts for catchability and selectivity of the Acoustic Trawl (AT) survey when computing estimates of 1+ biomass so the survey estimate of biomass cannot be compared directly with the threshold in the HG and OFL harvest control rules.
- Full attainment was assumed in projections consistent with the Terms of Reference (TOR) for catch-only projections, although average catch was used in the benchmark assessment.

- Discussion by the SSC under Agenda Item G.5 includes consideration of an alternative way to provide management advice for years between benchmark assessments that should be capable of making use of information from the AT survey but without the need to apply a model-based stock assessment.
- C. Cross Fishery Management Plan

2. Research and Data Needs

The Scientific and Statistical Committee (SSC) continued discussion regarding Research and Data Needs (RDNs), with respect to <u>Supplemental SSC Report 1</u> (developed at the March meeting) and a need to enable greater efficiency in this process.

The SSC continues to be concerned that achieving a balance between an extensive yet unwieldy inventory of very specific RDNs (such as the historical database) and a shorter list of overarching challenges and priorities (the current exercise) has proven difficult. Working towards a more stable and efficient process would be highly beneficial for future iterations of the RDN product. In addition to being responsive to feedback provided from Council advisory bodies, one way to improve the process may be to solicit feedback from the agencies or research institutions that consult or use the product of the RDN process in prioritizing their research.

SSC Notes

Some confusion remains regarding whether the SSC or the Council will assume final responsibility for the final list or whether it is possible that more than one list might result from this exercise.

The SSC continued to discuss the merits of maintaining, updating, or deleting the more extensive RDN database, noting that the most recent exercise was intended to provide a more concise version that may not perfectly match or align with the more detailed RDN list. Completely updating the database is not considered to be a good use of SSC resources, particularly given the time that has passed since the last update (more than 5 years), but deleting the database seems premature to some. The SSC recognizes that there remain many additional worthy research and data needs above and beyond the "moderately concise" list of priorities (such as specific RDNs reported in stock assessments).

It might be worth reviewing or discussing some elements of the NPFMC approach, which evaluates the benefits of available data streams for specific stock assessments and prioritizes those that inform multiple assessments.

With respect to the bullet under "data collection" entitled "Develop new approaches for using citizen science and improving fishery-dependent data usage to inform stock assessments," it is important to recognize that such data are rarely considered to be as robust as fishery independent data, however when fishery independent data are absent such data sources can be informative. One example is the recreational CPUE data collected from onboard observers in

commercial passenger fishing vessels (CPFV), which have been used for several nearshore groundfish stock assessments.

H. 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 2025 statement under this agenda item.

Stock Assessment Review (STAR) Panel 1 will cover the yellowtail rockfish North of 40°10'N. Lat. benchmark assessment on May 19-23, 2025 in Seattle, WA. The meeting will be conducted in-person, and broadcast for listening and remote public comment. The schedule will be for a full day on Monday and half days thereafter. The STAR Panel will be John Budrick (chair), one Center for Independent Experts (CIE) reviewer, Tommy Moore (SSC), and potentially one additional reviewer with knowledge of West Coast groundfish stock assessments. Representatives from the Groundfish Management Team (GMT) and Groundfish Advisory Subpanel (GAP) are requested.

The SSC Groundfish Subcommittee (GFSC) should meet in-person in Rohnert Park, CA to review update stock assessments for widow rockfish and yelloweye rockfish at 9:00 AM on June 11, 2025, the day prior to the full SSC at the June 2025 Council meeting. The meeting will be conducted inperson, and broadcast for listening and remote public comment. Representatives from the GMT and GAP are requested. The SSC GFSC may also discuss topics in preparation for the upcoming biennial harvest specifications.

The SSC notes that Salmon Council Operating Procedure (COP) 15 edits are shaded for September 2025 Year-at-a-Glance (<u>H.3 Attachment 3</u>) and could be completed should the Council request. The SSC encourages dialogue between Council staff and members of the SSC Salmon Subcommittee during document preparation in advance of this agenda item.

STAR Panel 2 will cover benchmark assessments for chilipepper rockfish and California quillback rockfish on June 23-27, 2025 in Santa Cruz, CA. The meeting will be conducted in-person, and broadcast for listening and remote public comment. The STAR Panel will be Cheryl Barnes (chair), two CIE reviewers, and one additional reviewer with knowledge of West Coast groundfish assessments. Representatives from the GMT and GAP are requested.

STAR Panel 3 will cover rougheye/blackspotted rockfish and sablefish on July 14-18, 2025 in Seattle, WA. The meeting will be conducted in-person, and broadcast for listening and remote public comment. The STAR Panel will be John Field (chair), two CIE reviewers, and Chris Free (SSC). Representatives from the GMT and GAP are requested.

The SSC Economics Subcommittee proposes conducting a review of the Trawl Catch Share Program Review in advance of the September 2025 Council meeting so that feedback from the SSC Economics Subcommittee and the SSC can be addressed, prior to final action scheduled in November. This review could occur as a virtual meeting in late August or early September of 2025. The SSC Groundfish Subcommittee should meet to review stock assessments, catch-only projections, rebuilding analyses (if needed), and to prepare harvest specifications before the September 2025 Council meeting. The SSC suggests a 1.5 or 2 day virtual meeting on August 12-13, 2025.

If further review and discussion of groundfish stock assessments not recommended by STAR Panels and rebuilding analyses (if needed) is warranted, the SSC Groundfish Subcommittee meeting (commonly referred to as "mop-up") is anticipated during the week of Sept 29-Oct 3, 2025. Depending upon the degree of complexity of any review materials, this meeting could be inperson, and broadcast for listening and remote public comment.

The SSC proposes the SSC Salmon Subcommittee hold a Salmon Methodology Review with participation from the Salmon Technical Team (STT), and any other appropriate advisory bodies or subcommittees in the first full week of October 2025, pending proposal and selection of final topics and completion of materials, at a time and place to be determined. The Salmon Subcommittee requests that, if the meeting will take more than one day, it be scheduled as one full day and one partial day, rather than two partial days.

The SSC Ecosystem Subcommittee anticipates conducting its annual review of Ecosystem Status Report Science Topics in Fall 2025 (virtual), based on the proposals put forward by the California Current Integrated Ecosystem Assessment team at the March 2025 Council meeting.

The SSC proposes the Coastal Pelagic Species (CPS) Subcommittee conduct a review of the new SWFSC/NWFSC integrated survey in early 2026 to identify any issues or additional analyses to be conducted prior to use of the results from the survey in CPS stock assessments.

The SSC has noted that the publication of Pre-Season Report I occurs within a few days of the March SSC meeting and this can limit comprehensive and careful review by all members. The SSC reiterates that it (or the SSC Salmon Subcommittee) could give a comprehensive review of Pre-Season Report I between April and November, and both the SSC (or SSC Salmon Subcommittee) and STT might jointly or separately review what material could be removed to ease the workload while still delivering necessary information.

The SSC has previously raised concerns with preparing statements for the Council on the first day of a meeting due to the need to provide clear, complete, and accurate scientific advice. The June 2025 quick reference agenda (Agenda Item H.3 Attachment 2) has two groundfish items, Adopt Stock Assessments for 2027-28 and Initiative 4: Risk Tables, which may require SSC input on the first day of the Council meeting. This would require an SSC member to miss some portion of the last day of the SSC meeting where much of the statement writing takes place and limiting their input on critical issues.

Proposed Workshops and SSC Subcommittee Meetings for 2025 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	Groundfish STAR Panel 1: Yellowtail Rockfish North of 40°10'N.Lat.	May 19-23, 2025	Seattle, WA/ Broadcast	Budrick – Chair, Moore - Reviewer	CIE (TBD)	GMT GAP	Bellman	
2	Groundfish Subcommittee Review: Update Stock Assessments	June 11, 2025 (day prior to full SSC)	Council/ Rohnert Park, CA	Groundfish Subcommittee	NA	GMT GAP	Bellman	
3	Groundfish STAR Panel 2: Chilipepper Rockfish Quillback Rockfish - California	June 23-27, 2025	Santa Cruz, CA/ Broadcast	Barnes – Chair	CIE (TBD), Invited Reviewer - Hicks	GMT GAP	Bellman	
4	Groundfish STAR Panel 3: Rougheye/Blackspotted Rockfish Sablefish	July 14-18, 2025	Seattle, WA/ Broadcast	Field – Chair, Free - Reviewer	CIE (TBD)	GMT GAP	Phillips/ Bellman	
5	Economic Subcommittee Meeting: Trawl Catch Share Program Review	August/Sept 2025	Council/Virtual	Economics Subcommittee	NA	GMT GAP	Bellman	
6	Groundfish Subcommittee Meeting: Stock Assessment/Rebuilding Review and Prepare Harvest Specifications	August 12-13, 2025	Council/Virtual	Groundfish Subcommittee	TBD	GMT GAP	Bellman	
7	Further Review of Groundfish Stock Assessments/Rebuilding Analyses	Sept 29-Oct 3, 2025 (After Sept CM)	Council/ Location TBD/Broadcast	Groundfish Subcommittee	TBD	GMT GAP	Bellman	

	Proposed Workshops and SSC Subcommittee Meetings for 2025 and Beyond Italic items are noted as potential or preliminary Shaded rows indicate newly added items since the prior statement									
	Workshop/MeetingPotential DatesSponsor/ Tentative LocationSSC Reps.Additional ReviewersAB Reps.Council Staff									
8	Salmon Methodology Review	October 2025	Council/ Portland, OR	Salmon Subcommittee	TBD	STT	Bellman/ Forristall			
9	Ecosystem Subcommittee Review: Ecosystem Status Report Science Topics	Fall 2025	Council/Virtual	Ecosystem Subcommittee	TBD	EWG EAS	Bellman			
10	CPS Methodology Review: SWFSC/NWFSC Integrated Survey	Early 2026	TBD	CPS Subcommittee	TBD	CPSMT CPSAS	Bellman/ Bernaus			

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

SSC Subcommittee Assignments

Bold denotes Subcommittee Chairperson

ADJOURN

PFMC 04/24/25