

# MINUTES

## Scientific and Statistical Committee

Pacific Fishery Management Council  
San Diego Marriott Del Mar  
Grand F/G Room  
11966 El Camino Real  
San Diego, CA 92130  
Telephone: 858-523-1700  
November 2-3, 2018

### Members in Attendance

Dr. Aaron Berger, National Marine Fisheries Service Northwest Fisheries Science Center, Newport, OR  
Dr. Evelyn Brown, Lummi Nation, Bellingham, WA  
Dr. John Budrick, California Department of Fish and Wildlife, Belmont, CA  
Mr. Alan Byrne, Idaho Department of Fish and Game, Boise, ID  
Dr. John Field, SSC Chair, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA  
Dr. Owen Hamel, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA  
Dr. Michael Harte, Oregon State University, Corvallis, OR  
Dr. Dan Holland, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA  
Dr. Galen Johnson, Northwest Indian Fisheries Commission, Olympia, WA  
Ms. Meisha Key, Key Coaching and Development, Lake Oswego, OR  
Dr. André Punt, University of Washington, Seattle, WA  
Dr. David Sampson, Oregon Department of Fish and Wildlife, Newport, OR  
Dr. William Satterthwaite, National Marine Fisheries Service Southwest Fisheries Science Center, Santa Cruz, CA  
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

Dr. Rishi Sharma, National Marine Fisheries Service Northwest Fisheries Science Center, Seattle, WA

SSC Recusals for the November 2018 Meeting		
SSC Member	Issue	Reason
None.		

**A. Call to Order-SSC Administrative Matters**

John Field called the meeting to order at 0800. Chuck Tracy briefed the SSC on their agenda. John Field suggested some minor changes in the agenda order which were accepted by the SSC.

Dave Sampson provided a quick summary of yesterday’s meeting of the Groundfish and CPS Subcommittees regarding rockfish steepness and sigma for groundfish and CPS species. Some further analysis is needed and the subcommittees will need to meet in the next couple of months to do an early review of these additional analyses.

**D. Salmon Management**

2. Preliminary Rebuilding Plans

Drs. Robert Kope (Northwest Fisheries Science Center) and Michael O’Farrell (Southwest Fisheries Science Center), along with other members of the Salmon Technical Team (STT), joined the Scientific and Statistical Committee (SSC) to answer questions about the five draft salmon rebuilding plans (Agenda Item D.2, Attachments 1-5). The SSC recognizes the extensive work involved in producing five rebuilding plans in such a short period of time. The SSC appreciates the large amount of biological information presented about each of the stocks in Section 3. However, Section 3 lacked sufficient detail on the data sources and underlying analyses for the SSC to conduct a thorough technical review.

The SSC discussion focused on the projection of future abundance (Section 4 in each of the attachments). The projection models had no relationship between spawners, productivity, and recruitment, nor did models for Chinook salmon consider how cohorts propagate through the age structure. The SSC suggests that a potential improvement given time constraints would be using autocorrelated draws from an abundance distribution. Similarly, it may be beneficial to explore correlation between abundance and management error. The SSC appreciates the exploration of two different abundance distributions to explore different productivity regimes for some of the plans. The SSC recommends modifications to the model that consider the underlying biology, or more fully developed arguments for why the existing models are sufficiently informative without incorporating the underlying biology.

The SSC recommends that the plans could describe the relative influence of contributing factors to the current overfished status, as was done for the Strait of Juan de Fuca Natural Coho. The SSC concurs with the STT’s recommendations to involve the Habitat Committee in further evaluating the status of habitat, as many of the stocks met the criteria for overfished status due, in part, to environmental conditions beyond the purview of the Council.

The SSC recommends that the SSC Salmon Subcommittee review the rebuilding plans prior to the

March Council meeting. Ideally, this review would take place far enough in advance for the STT to take action on any subcommittee recommendations.

*SSC Notes:*

*Is it possible to look at fishing alternatives in good and bad ocean regimes, to better look at how environment and fishing impacts interact?*

*VRAP framework not used to explore time required for rebuilding/limits on exploitation rates, and is an available tool NOAA uses to explore rebuilding exploitation rates for other analyses.*

*Include a paragraph acknowledging the economic/cultural importance of fishing to Tribal communities.*

## **E. Coastal Pelagic Species Management**

### 2. Methodology Review Preliminary Topic Selection

This agenda item was cancelled since no methodologies proposals were presented.

### 5. Review of Fishery Management Plan (FMP) Management Categories

The Scientific and Statistical Committee (SSC) was provided with a summary of the Coastal Pelagic Species Management Team (CPSMT) report on the quality and quantity of information used to determine whether CPS stocks are in the Active or Monitored categories ([Agenda Item E.5.a, CPSMT Report 1](#)).

The Categories specified in the Terms of Reference for groundfish and CPS stocks (1, 2, and 3) are used to set the sigma values based on the uncertainty of the associated stock assessments, and are based in part on the nature of the data on which the assessment is based. In contrast, the distinction between Active and Monitored for CPS stocks relates to assessment frequency, type of harvest control rule, and the perceived need for active management. This seems unnecessary given the overfishing limit (OFL), acceptable biological catch (ABC), and annual catch limit (ACL) structure which applies to all Council-managed stocks. Therefore, the SSC does not see the need for Active and Monitored Categories for CPS given that other fishery management plans (FMPs) operate without this structure.

The Active Category for CPS is similar to the way groundfish stocks are managed, in the sense that annual OFLs, ABCs, and ACLs are set for groundfish stocks every 2<sup>nd</sup> year based on the most recent assessments using OFL harvest control rules that differ among species groups (rockfish, flatfish, and roundfish). However, annual assessments are not conducted for groundfish stocks. Rather, groundfish stocks are selected for assessment based on the Council's stock prioritization approach. The OFLs, ABCs, and ACLs for data-poor groundfish stocks are usually unchanged from one management cycle to the next, similar to the situation for CPS stocks in the Monitored Category.

In contrast to CPS stocks in the Active Category, those in the Monitored Category are managed using default control rules and there is no regular review of OFLs and ABCs by the SSC.

If the Active and Monitored Categories are retained, the SSC supports the development of a set of review questions for Monitored stocks (draft given in Attachment 1 in [Agenda Item E.5.a, CPSMT Report 1](#)), which will provide a way to better document the review of the assignment of stocks to Categories (Active / Monitored). The SSC suggests that the review process would be more decisive if the questions were based on quantitative criteria. The SSC is willing to review proposals by the CPSMT for such criteria. In addition to tracking numerical values of the indicators that may be used by the CPSMT to assign CPS stocks to Categories, the CPMST should examine the technical basis and shortcomings of the indicators.

The SSC notes that the proposed review questions, as currently developed, do not lead to a decision or recommendation, such as whether the CPMST would recommend that a stock be moved from the Monitored to the Active Category. The SSC suggests that the review process be structured to lead to outcomes that can be used in the management process.

## 6. Stock Assessment Prioritization Process

The Scientific and Statistical Committee (SSC) reviewed the Coastal Pelagic Species Management Team (CPSMT) report “A Stock Assessment Prioritization Process for Coastal Pelagic Species.” Dr. Kevin Hill from the Southwest Fisheries Science gave an overview of the report.

The SSC agrees with the CPSMT that determining the prioritization of stock assessments among these five species can be achieved through a less formal examination of relevant information.

Rather than engaging in a formal prioritization exercise for coastal pelagic species, it would be beneficial in the short term to examine management tradeoffs associated with conducting an assessment of the central substock of northern anchovy (CSNA) relative to the benefits of carrying out new assessments of Pacific sardine and Pacific mackerel.

The SSC noted that sufficient data may exist to assess the CSNA even if the assessment is subject to considerable uncertainty. The scientific benefit of assessing the CSNA sooner rather than later may outweigh the benefits of waiting for additional data on the CSNA.

## ***I. Council Administrative Matters***

### 5. Future Council Agenda and Workload Planning

The Scientific and Statistical Committee (SSC) discussed future workload planning and has the following recommendations.

The SSC proposes a review by the Highly Migratory Species and Ecosystem subcommittees of an analyses of drivers of albacore distribution and availability to fisheries in the California Current. This review would be a half-day webinar in December or January. The SSC subcommittees would provide feedback similar to the regular review of CCIEA indicators that occurs during the September Ecosystem subcommittee meeting. The subcommittees will receive a report from the

CCIEA team for discussion at the webinar and report to the full SSC in March. The SSC will convey its recommendations in a statement to the Council in March.

The SSC proposes a review by the Salmon Subcommittee of the final rebuilding plans for five salmon stocks. The SSC recommends that this review occur in January, to allow the Salmon Technical Team (STT) to incorporate feedback prior to the March briefing book deadline.

The SSC recommends that revisions to the Accepted Practices Guidelines for Groundfish Stock Assessments be discussed by the Groundfish Subcommittee by webinar on December 19. The SSC proposes a two-and-a-half day Groundfish Subcommittee meeting in January in Seattle. The agenda for this meeting would be the skate catch reconstruction for the 2019 assessments, finalizing the accepted practices guidelines, and finalizing the report on Review of Proposed Sigma Methodologies and the Rockfish Steepness Prior. Members of the CPS subcommittee will participate remotely in the discussion of sigma.

The SSC recommends that the Council consider the new sigmas for adoption at the March Council meeting. The SSC recommends that the Council review science reports with the skate catch reconstruction and the Accepted Practices Guidelines for Groundfish Stock Assessments at the April Council meeting.

*SSC Notes:*

*Drivers of albacore distribution, HMS and Ecosystem subcommittees*

- *This analysis was initially proposed to be reviewed in March of 2018, but was not included in the September review as there was a desire to include both the HMS and Ecosystem Subcommittees of the SSC in the review, the need for this review was also mentioned in the September 2018 SSC statement on future meeting planning.*
- *Webinar needs to be scheduled prior to March briefing book deadline (mid-February). Need to work around catch reconstruction.*
- *Webinar should take no more than 3 hours.*
- *Dr. Barbara Muhling is expected to lead the analysis and will be contacted regarding the report and webinar.*

*Review of salmon rebuilding plans, Salmon SC*

- *The SSC would prefer that this meeting be an in person meeting, but will defer to the availability of the STT if their schedules can only allow for a webinar.*
- *Given that the STT must also prepare Preseason reports during this time, an alternative is for the Salmon subcommittee to review the final rebuilding plans on March 5.*

## ***J. Highly Migratory Species Management***

### **3. Biennial Harvest Specifications and Management Measures – Preliminary Action**

In September, the Council tasked the Scientific and Statistical Committee (SSC) with reviewing the suitability of the estimates and selected proxies for the status determination criteria used for highly migratory species (HMS). Members from the SSC's Highly Migratory Species

Subcommittee (HMSS), prior to the full SSC review, attempted to confirm the reference points and current status for most of the stocks listed in Tables 13-2 (overfishing status) and 13-3 (overfished status) of the report “Excerpted Review Draft from Status of the U.S. West Coast Fisheries for Highly Migratory Species through 2018” ([Agenda Item J.3.a, HMSMT Report 1](#)). Dr. Aaron Berger (SSC HMSS Chair) presented findings from the HMSS review to the full SSC. Ms. Sarah Shoffler (Southwest Fisheries Science Center (SWFSC)), Ms. Amber Rhodes (West Coast Region (WCR)), and Dr. Kit Dahl (Council staff) were at the presentation and provided comments and answered questions.

The HMS stock assessment reports, which are produced by three regional fishery management organizations, do not follow a standard template for reporting information and do not always report all the information needed to evaluate status based on the status determination criteria in the HMS Fishery Management Plan. For example, benchmark values reported in the assessment documents for some stocks were based on estimates averaged over a set of recent years instead of just the last year. For other stocks there were issues regarding the calculation of the minimum stock size threshold (MSST) because the MSST is calculated using a single value for the rate of natural mortality (M) whereas the assessments for these stocks used age-dependent values for M. Nonetheless, for most stocks, the HMSS review was able to confirm the values presented in Tables 13-2 and 13-3. The discrepancies that were identified by the HMSS were generally small and none of them seemed likely to impact the status determinations.

The SSC recommends that the Council request that SWFSC and WCR staff provide detailed descriptions of the data interpretation and technical steps used for calculating the HMS status determination criteria. If such information was available, the SSC would be willing to evaluate the process, recommend alterations (if any are needed) and thereby avoid future discrepancies in how to apply the HMS status determination criteria. It should not be necessary for the SSC to routinely review the HMS status determinations.

*SSC Notes:*

- *Aaron will formally communicate the discrepancies identified by the HMSS to Sarah Shoffler, Amber Rhodes, and Kit Dahl.*
- *Summary tables (e.g., Table 13-2) should include a column indicating the last year for which the assessment was informed by data.*
- *It might be possible to get the Stock Synthesis (SS) coding team to modify the SS software to produce the needed status determination values as part of the routine output from SS.*
- *The stock assessments in Tables 13-2 and 13-3 that were not reviewed were skipjack tuna in the EPO for 2017 and 2018 and bigeye tuna in the EPO for 2018. This omission was at the request of the HMSMT because of issues with these stock assessments.*

**A. SSC Administrative Matters**

8. Planning for April Reports and Recommendations for the Central Subpopulation of Northern Anchovy

SSC Notes:

**\*Schedule a call with Gerard and SSC CPS subcommittee ASAP\***

*A task list was provided by Kerry Griffin, and the SSC was asked to discuss progress and future resolution on items 6-8.*

<i>6. Determine a method to estimate the nearshore component of the central subpopulation of Northern Anchovy (CSNA) stock not sampled by the Acoustic Trawl Methodology and determine whether the extent of this estimate, if it is an extrapolation of offshore transect lines, is too large for the resulting value to be reliable for use in management.</i>
<i>7. Determine the timeline and process necessary to conduct the near-term establishment of an OFL for the CSNA stock using the methods described in the SSC report (<a href="#">Agenda Item C.4.a, Supplemental SSC Report I</a>).</i>
<i>8. Scope the process for recommending the frequency of revisions to OFLs and ABCs based on the potential impacts of changing reference points less frequently against potentially increased risk associated with not basing reference points on the most recent data.</i>

***The exact language from April 2018 – Council decisions***

*The Council directed the Scientific and Statistical Committee (SSC) to work with the NMFS Southwest Fisheries Science Center (SWFSC) on a method to estimate the nearshore portion of the central subpopulation of northern anchovy (CSNA) stock that is not accounted for in the Acoustic Trawl Method (ATM) survey, to develop a timeline and process to establish an overfishing limit (OFL) for CSNA using methods described in the supplemental SSC Report, and to establish a process for evaluating the potential impacts of infrequent changes to reference points against the risk of changing reference points in the absence of new data. The Council directed the SSC to report the results and any additional recommendations on management metrics at the April 2019 Council meeting.*

*No SWFSC analysts were in attendance to answer questions. Dale Sweetnam relayed information that a daily egg production method (DEPM) estimate of spawning biomass has been established. Gerard will present information to the Council tomorrow.*

*Tasks 7&8 rely completely on item #6. To date, the SSC has not received, nor reviewed a method to calculate an estimate of nearshore biomass. [Not sure if the SWFSC has even requested assistance from SSC to help develop a method?] Andre Punt is the lead on 7&8 once #6 has been completed. The current OFL is based on Conrad 1991, and SSC members (Owen/Andre) have not been successful in duplicating this value.*

*Need current biomass estimate to be reviewed, then need to review  $F_{MSY}$  update (like MSST report) by the CPS Subcommittee.*

*Most current nearshore aerial survey data is from October 2018 (K. Lynn).*

### SSC Subcommittee Assignments, November 2018

Salmon	Groundfish	Coastal Pelagic Species	Highly Migratory Species	Economics	Ecosystem-Based Management
<b>Alan Byrne</b>	<b>David Sampson</b>	<b>André Punt</b>	<b>Aaron Berger</b>	<b>Cameron Speir</b>	<b>Dan Holland</b>
John Budrick	Aaron Berger	Aaron Berger	John Field	Michael Harte	Evelyn Brown
Owen Hamel	John Budrick	Evelyn Brown	Michael Harte	Dan Holland	John Field
Michael Harte	John Field	John Budrick	Dan Holland	André Punt	Michael Harte
Galen Johnson	Owen Hamel	Alan Byrne	André Punt	David Sampson	Galen Johnson
Will Satterthwaite	Meisha Key	John Field	David Sampson		André Punt
Rishi Sharma	André Punt	Owen Hamel	Rishi Sharma		Will Satterthwaite
Ole Shelton	Rishi Sharma	Meisha Key			Ole Shelton
Cameron Speir	Tien-Shui Tsou	Will Satterthwaite			Cameron Speir
		Tien-Shui Tsou			Tien-Shui Tsou

**Bold** denotes Subcommittee Chairperson



Council Meeting Dates	Location	Likely SSC Mtg Dates	Major Topics
<p><b>March 5-12, 2019</b>  Proposed Subcommittees may meet Tue, March 5  Advisory Bodies may begin Wed, March 6  Council Session may begin Thur, March 7</p>	<p><a href="#">Hilton Vancouver Washington</a>  301 W. Sixth Street  Vancouver, WA 98660 USA  Phone: 360-993-4500</p>	<p><del>Half-day CPS Subem Session</del>  <b>Tue, Mar 5 Cancelled</b>  Two-day SSC Session  <b>Wed, Mar 6 – Thu, Mar 7</b></p>	<p>Identify Salmon Management Objectives (possible test fishery alternatives)  Salmon Review/Pre I  Salmon Rebuilding Plans  CA Current IEA Report  Climate and Communities Initiative  Identify New FEP Initiatives</p>
<p><b>April 9-16, 2019</b>  Proposed Subcommittees may meet Apr 9  Advisory Bodies may begin Wed, Apr 10  Council Session may begin Thur, Apr 11</p>	<p><a href="#">DoubleTree by Hilton Sonoma</a>  One Doubletree Drive  Rohnert Park, CA 94928  Phone: 707-584-5466</p>	<p>Two-day SSC Session  <b>Wed, Apr 10 – Thu, Apr 11</b></p>	<p>Pacific Sardine Assessment and Management Measures  CPS Methodology Review Topic Selection  Groundfish Science Improvement WS Reports  Salmon Methodology Review Topic Selection  Sablefish MSE Scoping</p>
<p><b>June 18-25, 2019</b>  Proposed Subcommittees may meet Tues, June 18  Advisory Bodies may begin Wed, June 19  Council Session may begin Thur, June 20</p>	<p><a href="#">DoubleTree by Hilton San Diego – Mission Valley</a>  7450 Hazard Center Drive  San Diego, CA 92108  Phone: 619-297-5466</p>	<p>One-day Groundfish Subem Session  <b>Tue, June 18</b>  Two-day SSC Session  <b>Wed, June 19 – Thu, June 20</b></p>	<p>Pacific Mackerel Assessment and Management Measures  CPS Stock Prioritization  Groundfish Cabezon and Update Assessments &amp; Yelloweye Catch Report  2021-2022 Groundfish Spex Planning</p>

<p><b>September 11-18, 2019</b>  Proposed Subcommittees may meet Wed, Sept 11  Advisory Bodies may begin Thur, Sept 12  Council Session may begin Fri, Sept 13</p>	<p><a href="#"><u>The Riverside Hotel</u></a>  <a href="#"><u>2900 Chinden Blvd</u></a>  <a href="#"><u>Boise, ID 83714</u></a>  <a href="#"><u>Phone: 208-343-1871</u></a></p>	<p>One-day Ecosystem Subcm Session  <b>Wed, Sep 11</b>  Two-day SSC Session  <b>Thu, Sep 12 – Fri, Sep 13</b></p>	<p>Groundfish Assessments Review  2021-2022 Groundfish Spex  Groundfish Stock Assessment Methodology Review Topic Selection  Off-year Science Improvements  Salmon Methodology Topic Priorities</p>
<p><b>November 13-20, 2019</b>  Proposed Subcommittees may meet Wed, Nov 13  Advisory Bodies may begin Thur, Nov 14  Council Session may begin Fri, Nov 15</p>	<p><a href="#"><u>Hilton Orange County/Costa Mesa</u></a>  <a href="#"><u>3050 Bristol Street</u></a>  <a href="#"><u>Costa Mesa, CA 92626</u></a>  <a href="#"><u>Phone: 714-540-7000</u></a></p>	<p>Two-day SSC Session  <b>Thu, Nov 14 – Fri, Nov 15</b></p>	<p>CPS Methodology Topic Selection  CPS SAFE  Groundfish Stock Assessments &amp; Cowcod Rebuilding Analysis (if needed)  2021-2022 Groundfish Spex  Groundfish Stock Assessment Methodology Topic Priorities  Salmon Methodology Review</p>

**Proposed Workshops and SSC Subcommittee Meetings for 2018 and 2019**

<b>Workshop/Meeting</b>		<b>Potential Dates</b>	<b>Sponsor/ Tentative Location</b>	<b>SSC Reps.</b>	<b>Additional Reviewers</b>	<b>AB Reps.</b>	<b>Council Staff</b>
1	Review Analyses of Drivers of Albacore Distribution and Availability to Fisheries in the California Current	Dec.- Jan. - TBD	Council/ Portland, OR/ webinar (3 hrs.)	HMS & Ecosystem Subcommittees	TBD	None	Dahl DeVore
2	Cabezon Pre-Assessment Workshop	Dec. 14 (10 a.m. – noon)	Council/ Portland, OR; Seattle, WA; Newport, OR/ webinar (2 hrs.)	Sharma & Interested GF Subcommittee members	None	GMT GAP	DeVore
2	Review of Accepted Practices Guidelines for Groundfish Stock Assessments	Dec. 19 (9 a.m.-1 p.m.)	Council/ Portland, OR/ webinar	GF Subcommittee	None	None	DeVore
3	<del>Review of Historical Catch Reconstructions of Skate Species and Other Skate Data Issues/ Finalize Accepted Practices Guidelines</del>	<del>Jan. 22-24, 2019 – Cancelled</del>	<del>Council/ Seattle, WA</del>	<del>GF Subcommittee</del>	TBD	Doerpinghaus (GMT) Richter (GAP)	DeVore
4	<del>Review of Nearshore ROV Survey Designs and Methodologies</del>	<del>Feb. 12-14, 2019 Cancelled</del>	<del>Council/ Santa Cruz, CA</del>	<del>Hamel (Chair), Shelton, Tsou, Sharma (?), Field</del>	CIE	None	DeVore
5	Pacific Sardine Update Assessment Review	Mar. 5, 2019 (1 p.m. start) Cancelled	Council/ Vancouver, WA	CPS Subcommittee	None	CPSMT CPSAS	Griffin

**Proposed Workshops and SSC Subcommittee Meetings for 2018 and 2019**

<b>Workshop/Meeting</b>		<b>Potential Dates</b>	<b>Sponsor/ Tentative Location</b>	<b>SSC Reps.</b>	<b>Additional Reviewers</b>	<b>AB Reps.</b>	<b>Council Staff</b>
<b>6</b>	Pre-Assessment Workshop for 2019 Groundfish Assessments (Except Cabezon)	Mar. 25-27	Council/ Portland, OR; Seattle, WA; Newport, OR (?)/ webinar (2 hrs.)	STAR Chairs & Interested GF Subcommittee members	None	GMT GAP	DeVore
<b>7</b>	Pacific Mackerel STAR Panel	Apr. 22 – 26, 2019	Council/ La Jolla, CA	Punt (Chair), Hamel, Satterthwaite (?), Budrick (?)	CIE	CPSMT CPSAS	Griffin
<b>8</b>	Cabezon STAR Panel	May 6-10, 2019	Council/ Newport, OR	Sharma (Chair), Shelton (?)	CIE	Mirick (GMT) Richter (GAP)	DeVore
<b>9</b>	Longnose and Big Skates STAR Panel	June 3-7, 2019	Council/ Seattle, WA	Sampson (Chair)	CIE Dorn	Doerpinghaus (GMT) Richter (GAP)	DeVore
<b>10</b>	SSC Cabezon and Update Assessments Review	June 18, 2019	Council/ San Diego, CA	GF Subcommittee	NA	Doerpinghaus (GMT) Richter (GAP)	DeVore
<b>11</b>	Sablefish STAR Panel	July 8-12, 2019	Council/ Seattle, WA	Field (Chair)	CIE Ianelli	Mirick (GMT) Richter (GAP)	DeVore
<b>12</b>	Gopher/Black-and-Yellow RF and Cowcod STAR Panel	July 22-26, 2019	Council/ Santa Cruz, CA	Hamel (Chair), Satterthwaite	CIE	Mandrup (GMT) Richter (GAP)	DeVore

**Proposed Workshops and SSC Subcommittee Meetings for 2018 and 2019**

<b>Workshop/Meeting</b>		<b>Potential Dates</b>	<b>Sponsor/ Tentative Location</b>	<b>SSC Reps.</b>	<b>Additional Reviewers</b>	<b>AB Reps.</b>	<b>Council Staff</b>
<b>13</b>	Review of STAR Panel Reviews to Develop the Mop-Up Review, if needed	Aug. 20, 2019	Council/ Portland, OR/ webinar	GF Subcommittee	NA	GMT GAP	DeVore
<b>14</b>	Groundfish Mop-Up Review Panel, if needed	Sep. 30 – Oct. 4, 2019	Council/ Seattle, WA	GF Subcommittee members	CIE	GMT GAP	DeVore
<b>15</b>	Data-Limited Methodology Workshop	2020 - TBD	Council/ TBD	GF & CPS Subcommittee members	TBD	TBD	DeVore