

**DRAFT SUMMARY MINUTES**  
**Scientific and Statistical Committee**

Pacific Fishery Management Council  
Doubletree by Hilton Spokane City Center  
Salon III Room  
322 N. Spokane Falls Ct.  
Spokane, Washington 99201  
Telephone: 509-455-9600

June 7, 2018

**Members in Attendance**

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  
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. Rishi Sharma, 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. Aaron Berger, National Marine Fisheries Service Northwest Fisheries Science Center, Newport, OR

<b>SSC Recusals for the June 2018 Meeting</b>		
<b>SSC Member</b>	<b>Issue</b>	<b>Reason</b>
None.		

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

John Field called the meeting to order at 0800. Mr. Chuck Tracy briefed the SSC on some new national science initiatives that were discussed at the recent CCC meeting. There is the initiative to improve scientific information used for decision-making. There was also a discussion on improving the national Research and Data Needs prioritization process. There is a strong desire to make this process work at a regional and national level by using these criteria for funding research through the Saltonstall-Kennedy program and other funding sources.

Mr. Tracy provided the agenda overview and the Council’s expectations for the SSC at this meeting. He brought up future workload tasks for which the SSC should start planning.

***E. Groundfish Management***

3. Final Action on Stock Assessment Plans and Terms of Reference (TOR) For Groundfish and Coastal Pelagic Species

Dr. Jim Hastie briefed the Scientific and Statistical Committee (SSC) on considerations for prioritizing groundfish stock assessments in 2019 and 2021 and the potential schedule for stock assessment review (STAR) panels. The SSC also discussed the proposed changes to the three Terms of Reference (TOR) for stock assessment, rebuilding analyses, and methodology reviews (Agenda Item E.3, Attachment 3, Supplemental Revised Attachment 4, and Attachment 5).

**Stock Assessment Plans for the 2019 Assessment Cycle**

At the March Council meeting, the Council identified a preliminary list of stocks for benchmark assessment in 2019 including sablefish, cowcod, cabezon in Oregon and California, longnose skate, big skate, gopher rockfish (potentially including black and yellow rockfish in a single assessment as a complex) and Dover sole. The SSC endorses the assessment of these species with the exception of Dover sole. Due to substantial time and staff commitments for ageing, the SSC agrees with the proposal by the National Marine Fisheries Service Northwest Fisheries Science Center (NMFS NWFSC) in Attachment 1 to move the consideration of a Dover sole assessment to the 2021 assessment cycle.

In place of the Dover sole assessment, Pacific cod or southern yellowtail rockfish could be assessed in 2019. Due to the expectation of additional age data, the SSC recommends conducting a benchmark southern yellowtail rockfish assessment, to be combined with the sablefish review panel, and developing a data poor or data-moderate assessment of Pacific cod. The SSC reviewed and supports the proposed STAR panel schedule for review of full assessments in 2019 provided in Attachment 1.

Update assessments proposed for 2019 include petrale sole and widow rockfish; however, the NWFSC advises that only one can be completed due to limited ageing capacity. As the petrale sole index from the NMFS trawl survey indicates an increasing trend in 2017 for most areas, this may indicate less urgency for an update in 2019. Additional research regarding the ecosystem drivers of recruitment will also be available for potential use in a full assessment in 2021. The SSC recommends prioritizing an update of the widow rockfish assessment in 2019, given age data from the trawl fishery is available. The SSC recommends a full assessment of petrale sole in 2021. The Council identified vermilion and sunset rockfish (as a complex with two assessment areas), brown rockfish, copper rockfish, quillback rockfish, bank rockfish, black rockfish (previously with three assessment areas) and Pacific cod as candidate species for full assessments in 2021. Brown rockfish was inadvertently excluded from the list of species in Attachment 1. If Pacific cod is assessed in 2019, NMFS has indicated the potential for two additional full assessments to be conducted, which could include either lingcod (with two assessment areas) or petrale sole and Dover sole. Lingcod was last assessed in 2017, although age composition data were excluded due to technical considerations that could be addressed in a full assessment in 2021. These potential improvements to the lingcod assessment should be weighed against the need for a new assessment of Dover sole and the aforementioned potential advancements to the petrale sole assessment.

The Council will need to identify stocks for catch-only projections and catch reports for consideration, at the September Council meeting. The SSC recommends a catch report be produced for yelloweye rockfish in 2019.

### **Revisions to the Terms of Reference**

The SSC discussed revisions to the Terms of Reference (TOR) for stock assessments, rebuilding analyses, and methodology reviews (Agenda Item E.3, Attachment 3, Supplemental Revised Attachment 4, and Attachment 5). The methodology review TOR is largely unchanged. The SSC endorses the proposed changes to the rebuilding and methodology review TORs with the following two changes. Regarding the revisions to the rebuilding analysis TOR:

- On page 7, proposed language indicating “the rebuilding analyses should assume full ACL removals” should be revised to “the rebuilding analyses should assume, as a default, full ACL removals”, as there are instances where alternative values may provide a more reasonable assumption.
- On page 7, the statement, “Rebuilding analyses need to include the model and parameter uncertainty in the stock assessment” should be revised to, “The rebuilding analyses need to include uncertainty from multiple models or parameter uncertainty where practicable and justify exclusion of known uncertainties.”

The SSC was informed of some substantial proposed changes to the stock assessment TOR from NMFS NWFSC and forthcoming comments from the GMT. The SSC requests additional time to consider these comments and provide subsequent revisions to the stock assessment TOR. At present, no agenda items are scheduled at the September Council meeting to provide an opportunity for further review other than a Methodology Review agenda item or a separate agenda item. Alternatively, the Council may delegate finalization of the stock assessment TOR to the SSC.

SSC Notes:

- *Widow rockfish fishing updating and needing to re-estimate selectivity and having time to process new otoliths from the new fishery may not be available until 2021 to inform selectivity or provide additional data from the shoreside fishery and IFQ fishery. New data available from the fishery may support an update in 2019 to address the new influx of data. Widow is relatively poorly supported by age composition data from the trawl survey and the data from the commercial fishery will provide useful information.*
- *Conducting five nearshore stocks may lead to efficiencies, but they can be challenging given the need to develop recreational indices of abundances. Expanded data-moderate method is a possibility. Brown rockfish was not included as a result of omission rather than prioritization of copper and quillback rockfish assessments.*
- *The SSC discussed the limited portion of the Pacific cod stock intermittently present off of the coast of Washington, at the southern end of their range and the potential for future efforts to assess the stock in collaboration with Canada.*
- *Research conducted by the NWFSC may identify population structure that could be taken into account in a full assessment of lingcod.*
- *TOR does not allow for many changes in the update and as a result, many stocks require a full assessment to evaluate changes to model structure that cannot be adequately reviewed in the process. A number of factors lead to few updates this cycle. The adjustments to sigma with the age of assessments may provide an impetus to update more assessments.*
- *No data moderate assessments this cycle as most stocks under consideration have age and length composition data to consider. Species like Rex sole are amenable to our current data moderate methods and DLM Tool may provide some other methods for use in the future that integrate comp data.*
- *Review of a data-moderate assessment in a STAR panel is not required but can be advantageous. It requires only review by the SSC groundfish subcommittee and approval by the SSC.*
- *Review of the sablefish catch reconstruction for Washington could be reviewed for application in 2019 as it was identified in the research and data needs last cycle.*
- *Schedule of assessments needs to take into account the needs of CIE reviewers with the timing of the reviews.*
- *On p. 12, add "larger of the category-specific default or the" between "Typically sigma would be based on" and "asymptotic uncertainty estimates..."*
- *On p. 43, the guidance on significant figures to use and report should apply to model outputs (e.g. depletion) also.*

- *The uncertainties referred to on page 7 of the rebuilding TOR are identified in the accepted practices guideline needs, which is applicable to assessments as well as rebuilding analyses.*
- *Earmark this for future meeting planning to schedule a meeting or send out a doodle pole to set a meeting time.*
- *At least the comments on the TOR from NMFS and others can be distributed to the SSC for consideration before September. Old text and grammatical edits can also be addressed. A groundfish and CPS subcommittee webinar with NMFS representatives (e.g., Jim Hastie) to discuss proposed changes before September would be beneficial providing writing assignments and establish review. A second look by SWFSC both in Santa Cruz and CPS staff in La Jolla would be beneficial as well.*
- *New NSI guidelines allow for carry over and testing of scenarios that are above or below the ACL and can be further explored in the future.*
- *In the future, the draft changes to the TORs should be included in the March briefing book to provide additional time for review and revision in a two meeting process.*
- *Regarding the Stock Assessment TOR, the SSC notes the benefit of adding a summary of major changes and a checklist provided in Appendix D. This checklist could be expanded to be applicable to both groundfish or coastal pelagic species (CPS) or another checklist compiled specifically addressing CPS.*
- *There was discussion of subsampling from 30,000 otoliths collected for Dover sole during the trawl survey and by PSMFC port sampling etc. There is a need to discuss whether reprioritization of sampling effort is necessary to obtain additional samples of other species.*
- *Despite the time elapsed since the last assessment in 2011, delaying assessment to 2021 does not present a concern given the low attainment of Dover sole ACLs in recent years. The SSC notes that an update of the 2011 assessment could be conducted, though advancements in Stock Synthesis allowing independent mortality estimates for males and females was identified by the STAR panel as a reason to conduct a full assessment and is now possible.*

### **C. Council Administrative Matters**

#### **3. National Marine Fisheries Service White Paper on Best Scientific Information Available (BSIA)**

Dr. Jim Hastie (National Marine Fisheries Service, [NMFS]) briefed the Scientific and Statistical Committee (SSC) on a revised draft of the white paper “Framework for Determining that Stock Status Determinations and Harvest Specifications are Based on the Best Scientific Information Available” ([Agenda Item C.3, Attachment 1, June 2018](#)). The SSC understands that the framework presented is meant to document the general process for determining best scientific information available (BSIA), with the intention that each Council will document their own processes.

Current Council and SSC processes appear to be consistent with the proposed framework. However, the SSC notes that the identification and role of the NOAA Fisheries representative in SSC review of an assessment (item 4b.ii. in Attachment 1) should be clarified. Specifically, will the representative come from the Regional office, or science centers? SSC members do not act as agency representatives in SSC deliberations.

The SSC also notes that there is still not an established protocol to resolve a disagreement between NMFS and the SSC on a determination of BSIA. However, each of the Council's other comments on previous versions ([Agenda Item C.3, Situation Summary, June 2018](#)) appear to be acknowledged in the revised draft.

*SSC Notes:*

*NMFS did not provide specific responses to input from Councils to initial drafts of the document. But comments seem to have been acknowledged:*

*SSC and Council previous comments:*

- 1. Policy needs to consider the SSC's conclusion on BSIA before making a determination of their own. [see 4d.ii.]*
- 2. PFMC SSC does not specify ABC (except for salmon). SSC determines OFL and Sigma, Council uses OFL and P\* to determine ABC. [see 4b and footnote 8.]*
- 3. Framework should clarify that BSIA requirement applies to all stock assessments – not just those performed by NMFS. [seems like this implication has been removed]*
- 4. Policy should result in BSIA determinations that are made expeditiously: recommend BSIA determinations be made at region level (not HQ) to avoid delay. [?????]*

*The “recommendation” at the top of page 2 proposes a document that describes how each region applies the framework. TOR's for groundfish and CPS, process for salmon and HMS are all different from each other. Therefore some kind of general document summarizing the PFMC process across FMPs may be needed. It is unclear who should have to write such a document.*

*NMFS can certify as BSAI an assessment that the SSC rejects. To our knowledge this has never happened in the WCR. Though we may have come close with 2017 POP.*

*“The SSC notes that there is still not an established protocol to resolve a disagreement between NMFS and the SSC on a determination of BSIA”: this issue is simply highlighted by the proposed framework and is not a new concern.*

#### 4. Research and Data Needs Document – Public Review Draft

The Scientific and Statistical Committee (SSC) reviewed the May 2018 draft of the Research and Data Needs Report (Attachment 1). The SSC agrees the document is ready for public review.

The May 2018 draft is comprehensive, yet its length and complexity makes identifying high priority research and data needs challenging. The amount of effort spent reviewing and revising

the Research and Data Needs report by the SSC, other Council advisory bodies, and Council staff should be commensurate with its usefulness. The SSC recommends that the 2023 Research and Data Needs report be substantially slimmed down. A much shorter 2023 document with fewer priorities could be updated more frequently to remain current with evolving Council research and data needs.

The Council may wish to task Council staff to review other Councils' research and data needs processes and prepare recommendations for a revised process for the 2023 Research and Data Needs report.

## 11. Future Council Meeting Agenda and Workload Planning

The Scientific and Statistical Committee (SSC) proposes the following for future work planning:

### **Review of Proposed Sigma Methodologies**

The SSC recommends that a review of new sigma methodologies for estimating uncertainty in stock assessments be conducted just prior to the November Council meeting. This meeting should also include a review of an updated steepness prior for West Coast rockfish necessary to support 2019 stock assessments. This methodology review is proposed as a Groundfish and Coastal Pelagic Species (CPS) subcommittee meeting on November 1<sup>st</sup>.

### **Review of Nearshore Remotely Operated Vehicles (ROV) Survey Designs and Methodologies**

The SSC proposes that this methodology review be scheduled after the November Council meeting. Members of the Groundfish subcommittee would conduct this review, along with a Center for Independent Experts (CIE) reviewer in late 2018 or early in 2019.

### **Review of Historical Catch Reconstructions of Skate Species**

The SSC recommended that a Groundfish subcommittee review of historical skate catches at the species level take place after the November Council meeting if Longnose and Big skates' stock assessments are approved for the 2019 assessment cycle.

### **Data-Limited Tool-Kit Review**

This review will explore the use of the Management Strategy Evaluation (MSE) component of the Data-Limited Methods (DLM) Toolkit and any proposed new data-moderate methodologies to be considered in groundfish or coastal pelagic species stock assessments. The SSC recommends that the format of this meeting be a workshop, rather than a formal methodology review, to be scheduled for early 2019.

### **California Current Integrated Ecosystem Assessment (CCIEA) Indicator Review**

The CCIEA indicator review is currently scheduled for September 5<sup>th</sup>, as an Ecosystem-based management subcommittee meeting. The SSC recommends that a review of "Analysis of drivers of distribution of Albacore in CCS", be conducted as a joint Highly Migratory Species/ Ecosystem-based management sub-committee webinar sometime after the November meeting.

### **Salmon Methodology Review**

A salmon methodology review is tentatively scheduled for October. The exact timing and duration should be determined at the September Council meeting based on the available material for review.

### **Other Items**

Three additional webinars are recommended; i) a webinar to discuss the Terms of Reference (TOR) for Stock Assessments, likely to occur in July, assuming that the Council accepts the SSC recommendation to postpone adoption of the TOR and scheduling final adoption at the September agenda; ii) a webinar for revisiting a subset of issues that arose at the catch estimation methodology from March of 2018, currently proposed for the week of July 30<sup>th</sup>, and iii) best practices for Groundfish and CPS assessments, likely to be scheduled in August of 2018.

### **Coastal Pelagic Species Subcommittee**

The SSC also discussed the priorities and the future work plan for Coastal Pelagic Species that have been recently discussed by Council Staff, members of the Coastal Pelagic Species Management Team, the Southwest Fisheries Science Center, and members of the SSC for 2018 and 2019. Products, leads, and timelines will continue to be refined and will be discussed in more detail in September 2018.

#### *SSC Notes:*

*With regards to the ROV survey, the issue of potential conflict of interest was discussed; the chair of Groundfish sub-committee will not chair this as the ROV survey is part of the methodology used in Oregon.*

*Sablefish catch reconstruction issues could occur as part of the sablefish data workshop.*

*Coastal Pelagic Species (CPS) Notes: Motion came out of April CPS discussion. 7 additional items were identified as priorities. A number of items relate to consideration of revisions to assigning stocks to either “monitored” or “actively managed” category. Others address stock assessment prioritization, nearshore survey and expansion issues (including new sampling methodologies), and consideration of the timeline and process necessary to establish an OFL for the CSNA stock based on the methods previously described in SSC reports. Note that this last item can only be developed after the survey expansion issues are addressed (planned for April 2019).*



## SSC Subcommittee Assignments, June 2018

<b>Salmon</b>	<b>Groundfish</b>	<b>Coastal Pelagic Species</b>	<b>Highly Migratory Species</b>	<b>Economics</b>	<b>Ecosystem-Based Management</b>
<b>Galen Johnson</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
Alan Byrne	John Budrick	Evelyn Brown	Michael Harte	Dan Holland	John Field
Owen Hamel	John Field	John Budrick	Dan Holland	André Punt	Michael Harte
Michael Harte	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>September 5-12, 2018</b>  Proposed Subcommittees may meet Wed, Sept 5  Advisory Bodies may begin Thu, Sept 6  Council Session may begin Fri, Sept 7</p>	<p><a href="#">DoubleTree by Hilton Hotel Seattle Airport</a>  18740 International Boulevard  Seattle, WA 98188  Phone: 206-246-8600</p>	<p>One-day Ecosystem Subcm Session  <b>Wed, Sep 5</b>  Two-day SSC Session  <b>Thu, Sep 6 – Fri, Sep 7</b></p>	<p>FEP Scoping  Climate and Communities Initiative  Groundfish Methodology Review Topic Selection  Groundfish and CPS Stock Assessment TOR  Science Improvement Report Research and Data Needs, Final Salmon Methodology Topic Priorities  HMS Drift GN Performance Metrics Methodology</p>
<p><b>November 1-8, 2018</b>  Proposed Subcommittees may meet Thu, Nov 1  Advisory Bodies may begin Fri, Nov 2  Council Session may begin Sat, Nov 3</p>	<p><a href="#">San Diego Marriott Del Mar</a>  11966 El Camino Real  San Diego, CA 92130  Phone: 858-523-1700</p>	<p>One-day GF &amp; CPS Subcms Session  <b>Thu, Nov 1</b>  Two-day SSC Session  <b>Fri, Nov 2 – Sat, Nov 3</b></p>	<p>CPS Methodology Topic Selection  Groundfish Methodology Topic Priorities  Salmon Methodology Review  Salmon Rebuilding Plans  HMS SDC and Reference Points</p>
<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>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  Groundfish Science Improvement WS Reports  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="#"><u>DoubleTree by Hilton Sonoma</u></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  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="#"><u>DoubleTree by Hilton San Diego – Mission Valley</u></a>  7450 Hazard Center Drive  San Diego, CA 92108  Phone: 619-297-5466</p>	<p>One-day Groundfish Subcm 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  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>  2900 Chinden Blvd  Boise, ID 83714  Phone: 208-343-1871</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>  3050 Bristol Street  Costa Mesa, CA 92626  Phone: 714-540-7000</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>
<b>1</b>	CCIEA Indicator Review	Sep. 5	Council/ Seattle, WA	Ecosystem Subcommittee	None	EWG EAS	DeVore
<b>2</b>	Salmon Methodology Review	Oct. 3?	Council/ Portland, OR or webinar?	Salmon Subcommittee	TBD	STT MEW	Ehlke
<b>3</b>	Review of Proposed Sigma Methodologies and Steepness Prior	Nov. 1	Council/ TBD	GF & CPS Subcommittees	TBD	TBD	DeVore
<b>4</b>	Review of Nearshore ROV Survey Designs and Methodologies	After Nov. Council meeting - TBD	Council/ TBD	GF Subcommittee members	CIE	TBD	DeVore
<b>5</b>	Review of Historical Catch Reconstructions of Skate Species and Other Skate Data Issues	After Nov. Council Meeting - TBD	Council/ TBD	GF Subcommittee	TBD	TBD	DeVore
<b>6</b>	Data-Limited ToolKit Methodology Review	After Nov. Council Meeting/ Fall Through Spring 2019 - TBD	Council/ TBD	GF & CPS Subcommittees	TBD	TBD	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>7</b> Pacific Sardine Update Assessment Review	March 2019 TBD	Council/ TBD	CPS Subcommittee	None	CPSMT CPSAS	Griffin
<b>8</b> Pacific Mackerel STAR Panel	Apr. 29 – May 2, 2019	Council/ La Jolla, CA	CPS Subcommittee members	CIE	CPSMT CPSAS	Griffin
<b>9</b> Cabezon STAR Panel	May 6-10, 2019	Council/ Seattle, WA or Newport, OR	GF Subcommittee members	CIE	GMT GAP	DeVore
<b>10</b> Longnose and Big Skates STAR Panel	June 3-7, 2019	Council/ Seattle, WA or Newport, OR	GF Subcommittee members	CIE	GMT GAP	DeVore
<b>11</b> SSC Cabezon and Update Assessments Review	June 18, 2019	Council/ San Diego, CA	GF Subcommittee	NA	GMT GAP	DeVore
<b>12</b> Gopher/Black-and-Yellow RF and Cowcod STAR Panel	July 8-12, 2019	Council/ Santa Cruz, CA	GF Subcommittee members	CIE	GMT GAP	DeVore
<b>13</b> Sablefish STAR Panel	July 22-26, 2019	Council/ Seattle, WA	GF Subcommittee members	CIE	GMT 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>14</b>	Groundfish Mop-Up Review Panel, if needed	Sep. 30 – Oct. 4, 2019	Council/ Seattle, WA	GF Subcommittee members	CIE	GMT GAP	DeVore

PFMC  
08/09/18