DRAFT SUMMARY MINUTES
Scientific and Statistical Committee

Pacific Fishery Management Council
Doubletree by Hilton Hotel Seattle Airport
Cascade 11 Room
18740 International Blvd.
Seattle, Washington 98188
Telephone: 206-246-8600

September 6-7, 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. 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. André Punt, University of Washington, Seattle, WA

SSC Recusals for the September 2018 Meeting		
SSC Member	**Issue**	**Reason**
Dr. Owen Hamel	I.5 Methodology Review Topic Selection	Dr. Hamel contributed to the proposed NWFSC ageing methodology
Dr. John Field	I.6 Science Improvement Report	Dr. Field contributed to the development of the ComX model under review.

A. Call to Order-SSC Administrative Matters

John Field called the meeting to order at 0800. Chuck Tracy briefed the SSC on their agenda. He recommended adding Agenda Item F.7 – Future Council Meeting Agenda and Workload Planning. The Council is preparing the 2019 budget and it would be helpful to understand the SSC's workload priorities.

Galen Johnson resigned as chair of the Salmon Subcommittee and Alan Byrne volunteered to be chair.

The tentative dates for the Nearshore ROV Survey Methodology review are February 12-14 in Santa Cruz. Owen Hamel volunteered to be chair; John Field, Rishi Sharma, Ole Shelton (tentative), and Theresa Tsou volunteered to serve on that methodology review. Theresa suggested one of her WDFW colleagues has more understanding of ROV survey design. The SSC will recommend the Council pay for Theresa and her colleague to attend the review.

November 1 is the tentative date for the Groundfish and CPS Subcommittees to meet starting at 10 a.m. to review the steepness prior meta-analysis and new sigma methodologies.

The Accepted Practices guidelines discussion is recommended to be conducted via a webinar as a first step with an in-person follow-up meeting. The skates' catch reconstruction, accepted practices, and potentially the proposed otolith spectroscopy methodology review is tentatively scheduled as a 2-day meeting in January in Seattle.

The Data-Limited methods review is proposed to be a workshop to determine if any new data-limited methods can be used in our process. This is not needed for the 2021-22 harvest specifications process and the CPS assessment prioritization should occur before this workshop is scheduled. Therefore, the workshop is proposed for 2020.

The Pacific sardine assessment review is proposed to be an in-person meeting of the CPS Subcommittee the day before the SSC meeting (March 5). This is proposed as a half-day meeting starting at 1 p.m.

A Groundfish Subcommittee webinar is proposed in August 2019 to review STAR panel reviews and decide the mop-up meeting details. This is proposed in the Stock Assessment terms of Reference.

A review by the HMS and Ecosystem Subcommittees of analyses of drivers of albacore distribution and availability to fisheries in the California Current is recommended for some time after the November Council meeting.

E. Salmon Management

1. Salmon Methodology Review – Final Topic Selection

The Scientific and Statistical Committee (SSC) discussed the list of proposed topics for the 2018 Salmon Methodology Review that is scheduled as a webinar on October 10. None of the previously proposed topics are ready for review this year; however, it would be useful to use the scheduled webinar to review technical aspects of the rebuilding plans being developed for the five salmon stocks that meet the criteria for being overfished. The SSC Salmon Subcommittee plans to review the fishery analysis in all five rebuilding plans.

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 September 26, 2108, to Robin Ehlke. If this deadline cannot be met, it is the responsibility of the author to contact Robin Ehlke, the SSC Salmon Subcommittee Chair, and the SSC 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 this topic at the November 2018 meeting.

F. Council Administrative Matters

1. Research and Data Needs Document – Final Adoption

The Scientific and Statistical Committee (SSC) reviewed the September 2018 draft of the Research and Data Needs document (Agenda Item F.1, Attachment 1). The SSC endorses the changes made to the document since June 2018 and recommends the following additional edits:

- On pages 12-13, remove the bullet points without associated text
- On page 31, drop the placeholder for a reference
- On page 34, replace the highlighted text with the words "spawning biomass"
- On page 73, delete "(see also Section 2.3)"

The amount of effort spent reviewing and revising the Research and Data Needs document by the SSC, other Council advisory bodies, and Council staff should be commensurate with the document's usefulness. Substantially improving the Research and Data Needs document and process would likely require dedicated funding or staff support, with a clearly identified party responsible for coordinating the process. The SSC recommends that the next Research and Data Needs document be considerably shortened, and if sufficient resources are available, it should be written with greater consistency among sections. The SSC suggests consideration of the general format adopted by the North Pacific Fishery Management Council (NPFMC), which maintains a top ten list of priorities along with a larger electronic database of research priorities (https://www.npfmc.org/research-priorities/). The workload associated with the current format of the Research and Data Needs document makes it prohibitive to update the document more often

than every five years, but a more streamlined format could allow for more frequent updating and tracking of progress.

The SSC recommends that the 2023 Research and Data Needs document not attempt to comprehensively report on the progress made on previously identified priorities. In retrospect, the SSC found that the benefits gained from this exercise for the 2018 document were small compared to the major costs in time and effort.

Regardless of any changes to document format or process, the Council may wish to set a limit on the number of highest priorities to be specified for each FMP or research topic area. It would also be useful to solicit input from the full suite of advisory bodies and the public on their highest priorities very early in the process of developing the next iteration of the document.

SSC Notes:

The SSC understands that Council staff made edits to address the June 2018 comments from the EWG that are incorporated in the document posted to the briefing book and which the SSC endorsed.

A long laundry list of research priorities serves the interests of researchers seeking funding. A shorter list would better capture true priorities and encourage more discussion and feedback among groups working toward agreement on top priorities.

A more streamlined and prioritized R&D document or a living list could help inform the SSC's methodology review and workshop planning.

COP12 may need revision to clarify roles and responsibilities.

6. Membership Appointments and Council Operating Procedures

The Scientific and Statistical Committee (SSC) reviewed Council Operating Procedure 4, regarding the roles, responsibilities, and function of the SSC. The SSC noted that on page three, the designation for National Marine Fisheries Service indicates there should be five members, but subsequent lines indicate that there should be two each from the Northwest and Southwest Fisheries Science Centers. The number five should be replaced by the number four.

With respect to the solicitation for at-large SSC members for the 2019-2021 term, the SSC recommends that the solicitation include a request for nominees who have expertise in oceanography and/or climate science.

7. Future Council Meeting Agenda and Workload Planning

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

The SSC proposes a meeting of the SSC Groundfish and Coastal Pelagic Species (CPS) Subcommittees to review the steepness prior meta-analysis and new sigma methodologies, on November 1, 2018, the day before the full SSC convenes. These analyses and methodologies, if

endorsed, could inform future stock assessments and harvest specifications. The meeting is proposed to start at 10 a.m. in San Diego, California to allow attendees to travel that morning.

The SSC proposes a review, which could be done by webinar, by the Highly Migratory Species (HMS) and Ecosystem Subcommittees of analyses of drivers of albacore distribution and availability to fisheries in the California Current, to be scheduled after the November Council meeting.

The SSC recommends the California and Oregon nearshore remotely operated vehicle (ROV) survey methodology review be scheduled on February 12-14, 2019, in Santa Cruz, California. Dr. Owen Hamel volunteered to be chair for this methodology review with Dr. John Field, Dr. Rishi Sharma, Dr. Ole Shelton (tentative), and Dr. Theresa Tsou serving on the review panel. Dr. Tsou suggested that the effort would benefit from participation by an additional WDFW scientist with greater understanding of ROV survey design. The SSC recommends the Council pay the travel expenses for Dr. Tsou and an additional WDFW scientist to attend the review.

The SSC recommends that revisions to the Accepted Practices Guidelines for Groundfish Stock Assessments be discussed by the Groundfish Subcommittee by webinar after the November Council meeting as a first step, with an in-person follow-up meeting that includes stock assessment teams. The SSC recommends the follow-up meeting occur as day one of a two-day meeting in January 2019 in Seattle, in conjunction with a one-day catch reconstruction workshop focused on skates for the 2019 assessment cycle.

The SSC recommends that the Pacific sardine update assessment review be an in-person meeting of the CPS Subcommittee on March 5, 2019, the day before the full SSC convenes. This is proposed as a half-day meeting starting at 1 p.m.

The SSC recommends that a Groundfish Subcommittee webinar be held in August 2019 to review groundfish STAR panel reviews and to recommend plans for the mop-up meeting, if needed. This webinar is proposed in the 2019-2020 Stock Assessment Terms of Reference.

The SSC has previously recommended that a Data-Limited workshop be held to determine whether new data-limited methods can be used in our harvest specification processes. As this meeting is not currently viewed as necessary to support the 2021-22 harvest specifications process, and the CPS assessment prioritization should occur before this workshop is scheduled, the SSC recommends this workshop occur no earlier than 2020.

SSC Notes:

Based on discussions with the Ecosystem Working Group (EWG), the SSC will evaluate whether the Ecosystem Subcommittee (SSCES) review of potential indicators should occur every other year (in September) rather than be an annual event (as recommended by the EWG). The SSCES chair will discuss the perceived need for this meeting in 2019 with the EWG and the Integrated Ecosystem Assessment (IEA) team, and the issue could revisited in November or March. It was noted that, with an August Groundfish Subcommittee meeting, the indicator review may be more easily accommodated in future September meetings.

G. Ecosystem Management

2. Fishery Ecosystem Plan Five-Year Review – Scoping

The Scientific and Statistical Committee (SSC) discussed the scoping process for the Fishery Ecosystem Plan (FEP) Five-Year Review (Agenda Item G.2). The SSC supports the recommendations of the Ecosystem Workgroup and the Groundfish Advisory Subpanel that the FEP should be revised to reflect current scientific understanding and reorganized to improve the specificity and focus of the impact of cumulative effects on the environment. If the Council chooses to update the FEP, the SSC recommends additional scientific resources be allocated to support the revision process. The scientific expertise needs will likely be similar to those allocated to the development of the 2013 FEP. The SSC could review the changes to the FEP but suggests that revisions of the FEP be completed by scientific experts outside of the SSC to avoid self-review.

SSC Notes:

The Ecosystem Subcommittee report on indicators will likely be completed before the November 2018 meeting and will be considered for adoption by the SSC then. The report will be appended to the SSC's statement for the March 2019 CCIEA report.

3. Climate and Communities Initiative Update

The Scientific and Statistical Committee (SSC) discussed the Climate and Communities Initiative, including the report on The Nature Conservancy workshop held in May 2018 (Agenda Item G.3, Attachment 1) and the Ecosystem Workgroup (EWG) report (Agenda Item G.3.a, Ecosystem Workgroup Report 1).

The SSC supports the EWG recommendation that its membership be supplemented with scientific expertise to aid with the next steps in the initiative. Additional members with expertise in fields such as climate modeling, oceanography, stock assessment, and social science will be needed to successfully complete work on both the Climate and Community Initiatives and revisions to the Fishery Ecosystem Plan.

SSC Notes:

TNC report and workshop didn't contain any scientific conclusions or recommendations that required SSC review or comment.

EWG Report:

Scenario planning vs. MSE – MSE has predictive capabilities; there is a model that generates forecasts. Scenario planning is not necessarily the same as MSE.

Scenario planning would require a range of expertise: climate projections, ecological effects, economic and social impacts.

EWG Recommendations (Section 7.0, p. 7):

Most don't require any SSC review or comment at this time. We look forward to providing review in the next year or so as the Climate and Communities Initiative progresses.

Bullet Point 4, general topics or management areas: the examples listed "contain everything under the sun."

The example of building climate change planning measures in to stock assessment and development and review processes may require significant changes in stock assessment models (e.g., "we're still using B_0") and may require significant technical advances.

H. Highly Migratory Species Management

5. Drift Gillnet Performance Metrics Methodology

The Scientific and Statistical Committee (SSC) reviewed the random forest regression tree method used to estimate protected species bycatch and interactions in the drift gillnet fishery. Mr. Jim Carretta (Southwest Fisheries Science Center) presented the new approach, compared it to the ratio estimator approach, and answered questions. Random forest regression tree bycatch estimates are based on models that potentially incorporate location, gear, and oceanographic covariates.

The SSC considers the regression tree method an improved approach for estimating annual bycatch levels compared to the ratio estimator approach. It is also a more efficient way to use all available data to predict mean bycatch per unit effort for unobserved sets and is potentially responsive to changes in fishing behavior and oceanographic conditions when those factors prove to be significant predictors of bycatch rate. This approach may also identify factors that managers or industry can use to reduce future bycatch.

The SSC finds the use of the regression tree method to be an improvement over the ratio estimator approach for estimating bycatch in the drift gillnet fishery.

SSC Notes:

Both the regression tree and ratio approaches face challenges when observer coverage is low or non-representative, bycatch events are very rare, or there are aggregations of bycatch in time or space. Changes in observer coverage can induce behavioral changes of fishermen which can influence model results if not explicitly addressed. For example, the use of 'pingers' on observed trips may (or may not) be an adequate representation of use on unobserved trips, depending on compliance. Mr. Carretta was not aware of pinger compliance issues in this fishery and stated that there is a significant level of enforcement by the Coast Guard.

Annual ratio estimates are calculated as observed bycatch divided by the annual observer coverage rate. Observed bycatch is typically averaged over five or more years to derive a mean estimate due to imprecision in annual estimates.

Encounters of aggregated fish, or other sources of spatiotemporal covariation, can result in non-independent observations so model results based on assumptions of independence can underestimate variance, but could be adjusted by estimating a variance inflation factor.

The random forest regression tree method should be further explored for use with estimating finfish bycatch rates and compared to the Bayesian methods presented in 2015 (Agenda Item E.3.a, HMSMT Report, June 2015).

Mr. Carretta indicated that pooling data over at least 10 years would likely be required when using ratio estimates. However, it was noted that this time block could be reduced during times with higher observer coverage.

The SSC noted that the regression tree approach lumps data over the 27 year time period with no explicit consideration of time or changes in abundance, with limited consideration of time varying properties (e.g., oceanographic conditions, and use of technology (e.g., number of pingers). A year factor was evaluated in initial regression trees but largely resulted in model overfitting due to small sample sizes. Thus, there was no explicit year effect in the model.

Parametric approaches using logit models and choice-based sampling to address issues associated with very rare events might be an alternative to this approach that would be worth exploring.

I. Groundfish Management

4. Stock Assessment Terms of Reference – Final Action

In June 2018, the Scientific and Statistical Committee (SSC) reviewed the Terms of Reference (TOR) for stock assessments, rebuilding analyses, and methodology reviews. The SSC endorsed the TORs for rebuilding analyses and methodology reviews but delayed the adoption of the stock assessment TOR to incorporate proposed changes from the Northwest Fisheries Science Center (NWFSC) and comments from the Groundfish Management Team (GMT). Subsequently, the SSC Groundfish Subcommittee, Coastal Pelagic Species (CPS) Subcommittee, GMT, and the CPS Management Team conducted a webinar to discuss the proposed changes on August 2nd. Dr. David Sampson presented the revised TOR for 2019 and 2020 groundfish and CPS stock assessments (Agenda Item I.4, Attachment 1) to the full SSC.

The SSC endorsed the revised TOR with the following changes:

Section 1. "Summary of Major Changes ..." (pp.4-5), add the following new bullets, which reflect changes in existing text:

- Section added on State / Tribal Data Experts and State / Tribal Responsibilities.
- SSC identified as the overseer of the assessment review process, responsible for monitoring progress against milestones/deadlines.
- Final data must be provided to the STATs at least eleven weeks in advance of the STAR panel meeting.
- Data deadlines and STAT leads added to the Appendix A table.

Recommended changes to other sections:

1. Add a new bullet item to Appendix G (Accepted Practices Guidelines).
    - Provide guidance regarding reasonable approaches for documenting step-by-step transition to the new assessment model from a previous assessment model, if applicable.
2. P.21, last paragraph, replace the last sentence with the following:

"Each STAT conducting a full assessment should appoint a representative to attend the Council meeting where the assessment is scheduled to be reviewed and give presentations of the assessment to the SSC and other Council advisory bodies. The STAT is strongly encouraged to attend the associated Groundfish Subcommittee that precedes the Council review. In addition, the STAT should be prepared to respond to MT or Council staff requests for model projections to facilitate development of ACL alternatives."

3. P.22, third paragraph, replace the last sentence with the following:

"For stocks identified as needing a rebuilding analysis, associated STATs must attend the Groundfish Subcommittee meeting that precedes the September Council meeting. Groundfish rebuilding analyses are typically reviewed at the mop-up panel."

4. Council staff will add a row to the table in Appendix A for the late summer Groundfish Subcommittee meeting for review of the assessments from STAR panels 2-4; and a column of STAT lead/contact for each assessment.
5. Council staff will fix some typographical errors.

SSC Notes:

- *Catch-only projections are not an issue for CPS assessments in 2019-2020 because the next catch-only projection is scheduled for Pacific mackerel in 2021. The SSC should revisit potential guidance on recruitment assumptions for CPS when preparing the 2021-2022 TOR.*
- *The table in Appendix A only covers assessments in 2019. There may be a sardine assessment in 2020. This assessment will be added to the Appendix A table pending confirmation of the assessment plan.*

5. Methodology Review Topic Selection

The Scientific and Statistical Committee (SSC) discussed the proposal to review the determination of fish ages using Fourier-transform Near-infrared Spectroscopy (FT-NIRS) analysis of otoliths and vertebrae provided by the Northwest and Alaska Fisheries Science Centers (NWFSC and AFSC, respectively; Agenda Item I.5, Attachment 1). Dr. Jim Hastie (NWFSC) briefed the SSC on the motivation for this proposal and an overview of the method. Traditional age reading requires a great deal of time and resources. This method shows promise of greater efficiency, reducing the time it takes to age structures, and allowing more samples to be included in future stock assessments to inform population estimates (e.g., growth).

Evaluation and application of this method are ongoing, and the SSC encourages further exploration before scheduling a formal review. The NWFSC will continue to collaborate with the AFSC to evaluate the FT-NIRS performance with a range of West Coast groundfish species, including longnose skate. The SSC recommends the results be available to consider at the data workshop

scheduled for March 2019, prior to the Stock Assessment Review Panel for skates being held in June 2019. The SSC anticipates this method will be a candidate for an off-year science project in the next assessment cycle.

The Groundfish Management Team may also propose new impact projection models or other models to inform future management decisions. The SSC will consider these proposals at the November meeting for final adoption of methodology reviews if presented.

SSC Notes:

Many questions came up that may not be answered in the short-term. For example, does this method get a different signal from an otolith that has been sitting on a shelf for 50 years vs. one that has recently been collected - (protein discussion)?

Expertise is needed to review this method. Initially, to help prepare for anticipated questions that may come up during a review, as well as CIE expertise for a review.

Methods for incorporating age data developed using this approach in groundfish stock assessments would also have to be discussed/addressed in the future (i.e., ageing error).

Skate samples go back to 2009.

6. Science Improvement Report

The Scientific and Statistical Committee (SSC) discussed reports and recommendations from the Catch Estimation Methodology Review. A meeting to review the proposed method to partition landings to species in California commercial fisheries (Agenda Item I.6, Attachment 1), took place March 28-29, 2018, in Santa Cruz, California (Agenda Item I.6, Attachment 2), and a supplemental review webinar was held on July 31, 2018 (Agenda Item I.6, Supplemental Attachment 3). Dr. John Field presented an overview of the modeling approach. Dr. David Sampson presented the reports and recommendations of the review panel.

The goal of the proposed method is to provide a rigorous and repeatable Bayesian analysis to estimate landings by species where reported landings are by market category with sparse sampling for species compositions within those categories. This issue is primarily associated with rockfish species. The proposed landings estimation approach is, in its theoretical underpinnings, an improvement over the "borrowing" rules currently used for CalCOM, and provides uncertainty estimates. More work is needed to refine and test this new approach before it can be used, particularly in terms of determining appropriate model complexity and modeling choices. The review panel was unable to endorse the method without further analysis and exploration, identifying several items still to be addressed. The SSC similarly does not endorse the use of this new method at this time. The SSC commends the team for progress in addressing this difficult issue and their responsiveness to the requests of the review panel, and encourages further work in the hope an approved version of this approach will be ready to produce landings estimates for assessments conducted in 2021. This will require some level of additional review in 2020, potentially by the SSC's Groundfish Subcommittee, rather than by a full methodology review panel.

SSC Notes:

All samples are treated equally, independent of the size of the landing. Thus, the assumption is that each sample is equally representative of all landings within a stratum.

The following six items (1-6) are the "several items" referenced in the main statement to be addressed.

Two items NOT addressed at July webinar: (1) Explore variability in sampling among clusters within samples – currently pooling clusters, not considering if potentially important information on variability exists here. (2) Provide self-test documentation using simulated data to confirm that model is doing what is expected.

Other long-term recommendations: (3) Resolve whether or not to weight composition samples by the landed catch amounts. (4) Investigate discrepancies between ComX catch series and current catch series. (5) Investigate the effects on model performance of having an increased number of market categories over time. (6) As an additional diagnostic tool, compute posterior predictive distributions of the landings for the sampled strata and compare these to the sampled data expanded to the sampled landings (i.e., with no data borrowing).

Exploring overdispersion in the rho parameter would be useful, but may not be doable.

Other potential extensions of the approach include: (A) hindcast, (B) expansion to OR and WA, (C) expansion to other taxa.

SSC Subcommittee Assignments, September 2018

Salmon	Groundfish	Coastal Pelagic Species	Highly Migratory Species	Economics	Ecosystem-Based Management
Alan Byrne	**David Sampson**	**André Punt**	**Aaron Berger**	**Cameron Speir**	**Dan Holland**
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
November 1-8, 2018 Proposed Subcommittees may meet Thu, Nov 1 Advisory Bodies may begin Fri, Nov 2 Council Session may begin Sat, Nov 3	San Diego Marriott Del Mar 11966 El Camino Real San Diego, CA 92130 Phone: 858-523-1700	One-day GF & CPS Subcms Session **Thu, Nov 1** Two-day SSC Session **Fri, Nov 2 – Sat, Nov 3**	CPS Methodology Topic Selection Groundfish Methodology Topic Priorities Salmon Methodology Review Salmon Rebuilding Plans HMS SDC and Reference Points
March 5-12, 2019 Proposed Subcommittees may meet Tue, March 5 Advisory Bodies may begin Wed, March 6 Council Session may begin Thur, March 7	Hilton Vancouver Washington 301 W. Sixth Street Vancouver, WA 98660 USA Phone: 360-993-4500	Half-day CPS Subcm Session **Tue, Mar 5** Two-day SSC Session **Wed, Mar 6 – Thu, Mar 7**	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
April 9-16, 2019 Proposed Subcommittees may meet Apr 9 Advisory Bodies may begin Wed, Apr 10 Council Session may begin Thur, Apr 11	DoubleTree by Hilton Sonoma One Doubletree Drive Rohnert Park, CA 94928 Phone: 707-584-5466	Two-day SSC Session **Wed, Apr 10 – Thu, Apr 11**	Pacific Sardine Assessment and Management Measures CPS Methodology Review Topic Selection Salmon Methodology Review Topic Selection Sablefish MSE Scoping
June 18-25, 2019 Proposed Subcommittees may meet Tues, June 18 Advisory Bodies may begin Wed, June 19 Council Session may begin Thur, June 20	DoubleTree by Hilton San Diego – Mission Valley 7450 Hazard Center Drive San Diego, CA 92108 Phone: 619-297-5466	One-day Groundfish Subcm Session **Tue, June 18** Two-day SSC Session **Wed, June 19 – Thu, June 20**	Pacific Mackerel Assessment and Management Measures Groundfish Cabezon and Update Assessments & Yelloweye Catch Report 2021-2022 Groundfish Spex Planning

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

Proposed Workshops and SSC Subcommittee Meetings for 2018 and 2019							
Workshop/Meeting		**Potential Dates**	**Sponsor/ Tentative Location**	**SSC Reps.**	**Additional Reviewers**	**AB Reps.**	**Council Staff**
1	Review of Proposed Sigma Methodologies and Steepness Prior	Nov. 1	Council/ Costa Mesa, CA	GF & CPS Subcommittees	TBD	TBD	DeVore
2	Review Analyses of Drivers of Albacore Distribution and Availability to Fisheries in the California Current	After Nov. Council Meeting - TBD	Council/ Portland, OR/ webinar	HMS & Ecosystem Subcommittees	TBD	HMSMT HMSAS EWG EAS	Dahl
3	Review of Accepted Practices Guidelines for Groundfish Stock Assessments	Dec. TBD	Council/ Portland, OR/ webinar	GF Subcommittee	None	None	DeVore
4	Review of Nearshore ROV Survey Designs and Methodologies	Feb. 12-14, 2019	Council/ Santa Cruz, CA	GF Subcommittee members	CIE	TBD	DeVore
5	Review of Historical Catch Reconstructions of Skate Species and Other Skate Data Issues	Jan. 2019 - TBD	Council/ TBD	GF Subcommittee	TBD	TBD	DeVore
6	Pacific Sardine Update Assessment Review	Mar. 5, 2019	Council/ Vancouver, WA	CPS Subcommittee	None	CPSMT CPSAS	Griffin

Proposed Workshops and SSC Subcommittee Meetings for 2018 and 2019							
Workshop/Meeting		**Potential Dates**	**Sponsor/ Tentative Location**	**SSC Reps.**	**Additional Reviewers**	**AB Reps.**	**Council Staff**
7	Pacific Mackerel STAR Panel	Apr. 29 – May 2, 2019	Council/ La Jolla, CA	CPS Subcommittee members	CIE	CPSMT CPSAS	Griffin
8	Cabezon STAR Panel	May 6-10, 2019	Council/ Seattle, WA or Newport, OR	GF Subcommittee members	CIE	GMT GAP	DeVore
9	Longnose and Big Skates STAR Panel	June 3-7, 2019	Council/ Seattle, WA or Newport, OR	GF Subcommittee members	CIE	GMT GAP	DeVore
10	SSC Cabezon and Update Assessments Review	June 18, 2019	Council/ San Diego, CA	GF Subcommittee	NA	GMT GAP	DeVore
11	Gopher/Black-and-Yellow RF and Cowcod STAR Panel	July 8-12, 2019	Council/ Santa Cruz, CA	GF Subcommittee members	CIE	GMT GAP	DeVore
12	Sablefish STAR Panel	July 22-26, 2019	Council/ Seattle, WA	GF Subcommittee members	CIE	GMT GAP	DeVore
13	Review of STAR Panel Reviews to Develop the Mop-Up Review, if needed	Aug. 2019 - TBD	Council/ Portland, OR/ webinar	GF Subcommittee	NA	GMT GAP	DeVore

Proposed Workshops and SSC Subcommittee Meetings for 2018 and 2019							
Workshop/Meeting		**Potential Dates**	**Sponsor/ Tentative Location**	**SSC Reps.**	**Additional Reviewers**	**AB Reps.**	**Council Staff**
14	Groundfish Mop-Up Review Panel, if needed	Sep. 30 – Oct. 4, 2019	Council/ Seattle, WA	GF Subcommittee members	CIE	GMT GAP	DeVore
15	Data-Limited Methodology Workshop	2020 - TBD	Council/ TBD	GF & CPS Subcommittee members	TBD	TBD	DeVore

PFMC
10/01/18