

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

Pacific Fishery Management Council  
Red Lion Hotel Sacramento  
Sierra A Room  
1401 Arden Way  
Sacramento, CA 95815  
916-922-8041  
April 5-6, 2004

**Call to Order**

The meeting was called to order at 8 a.m. Dr. Donald McIsaac briefed the Scientific and Statistical Committee (SSC) on priority agenda items.

Subcommittee assignments for 2004 are detailed in the table at the end of this document.

**Members in Attendance**

Mr. Tom Barnes, California Department on Fish and Game, La Jolla, CA  
Mr. Steve Berkeley, University of California, Santa Cruz, CA  
Mr. Alan Byrne, Idaho Department of Fish and Game, Nampa, ID  
Mr. Robert Conrad, Northwest Indian Fisheries Commission, Olympia, WA  
Dr. Ramon Conser, National Marine Fisheries Service, La Jolla, CA  
Dr. Michael Dalton, California State University, Monterey Bay, CA  
Dr. Martin Dorn, National Marine Fisheries Service, Seattle, WA  
Dr. Kevin Hill, California Department of Fish and Game, La Jolla, CA  
Mr. Tom Jagielo, Washington Department of Fish and Wildlife, Olympia, WA  
Dr. Peter Lawson, National Marine Fisheries Service, Newport, OR  
Dr. Hans Radtke, Yachats, OR  
Ms. Cynthia Thomson, National Marine Fisheries Service, Santa Cruz, CA  
Dr. André Punt, University of Washington, Seattle, WA  
Dr. Shijie Zhou, Oregon Department of Fish and Wildlife, Portland, OR

**Members Absent**

Dr. Han-Lin Lai, National Marine Fisheries Service, Seattle, WA  
Dr. Stephen Ralston, National Marine Fisheries Service, Santa Cruz, CA

**Scientific and Statistical Committee Comments to the Council**

The following is a compilation of April 2004 SSC reports to the Council.

## ***D. Salmon Management***

### **1. Identification of Stocks Not Meeting Conservation Objectives for Three Consecutive Years**

Mr. Dell Simmons of the Salmon Technical Team reviewed the escapements of natural salmon stocks for the SSC. Based on current data, only the Grays Harbor fall chinook stock has failed to meet its escapement goal for three consecutive years. This stock is an exception to the overfishing criteria because Pacific Fishery Management Council fisheries have limited impacts on this stock. The most recent available escapement datum is for 2002. The estimated escapement of this stock in 2002 was 11,300, while the escapement goal is 14,000. The last time this stock attained its escapement goal was in 1997.

### **3. Methodology Reviews for 2004**

The SSC met with Mr. Dell Simmons of the Salmon Technical Team (STT) to identify and prioritize potential methodology review issues for the coming year. Current issues include unresolved items from 2003 and two new items. The SSC has identified the following list of methodology review issues for 2004/2005 and places the highest priority on the first two items:

Chinook and coho Fishery Regulation Assessment Model (FRAM) documentation: An overview document for the chinook and coho FRAMs has been produced by the Model Evaluation Workgroup (MEW). The MEW plans to produce detailed technical documentation for each of the FRAMs. The SSC views this as the highest priority for the MEW during the coming year.

Chinook FRAM for mark-selective fisheries: The Washington Department of Fish and Wildlife has modified the chinook FRAM to accommodate mark-selective fisheries. The SSC could not endorse chinook FRAM as a tool to evaluate mark-selective fisheries in 2003, but application of the model to estimate mark-selective fishery impacts should be reviewed if such fisheries are planned for 2005 and beyond. Model documentation is a pre-requisite for this review. A limited mark-selective fishery for chinook was conducted in Washington Marine Catch Areas 5 and 6 in 2003. The results from this fishery, in comparison to FRAM predictions, may allow a limited empirical evaluation of the chinook FRAM for mark-selective fisheries.

Chinook Rebuilding Exploitation Rate Analysis: An evaluation of rebuilding exploitation rates (RERs) for ESA-listed chinook stocks based on coded-wire tag (CWT) data in comparison to RERs based on chinook FRAM is projected to be completed by October 2004.

Coho FRAM fisheries for Canadian stocks: The Coho Technical Committee of the Pacific Salmon Commission (PSC) has modified the coho FRAM to add fishery and stock strata for Canadian management. The SSC has reviewed an interim version of these changes.

Oregon Department of Fish and Wildlife Oregon coastal natural (OCN) matrix: The Oregon Department of Fish and Wildlife is developing a technical appendix to the OCN Work Group matrix as recommended by the Council at its November 2000 meeting.

Oregon Department of Fish and Wildlife management plan for Lower Columbia River coho salmon: The plan is based on new methods that are currently undergoing inter-agency review.

Columbia River Fall chinook ocean abundance predictors: There has been some preliminary work on producing ocean run-size predictors for these stocks. The SSC will review these predictors when they have been fully developed and documented.

OCN coho salmon prediction methodology: New predictors are in development. The SSC will review any proposals for change as requested.

The SSC notes that the PSC is sponsoring a workshop in June to review the coastwide CWT. This review will include an examination of the impact of selective fisheries on the CWT system and a review of possible alternatives to the CWT system. This workshop will produce recommendations that may have important implications for data that are currently important to salmon management by the Council and its advisory bodies.

As always, the SSC requires good documentation and ample review time to make efficient use of the SSC Salmon Subcommittee's time. Materials to be reviewed should be submitted by September. Agencies should be responsible for ensuring materials submitted to the SSC are technically sound, comprehensive, clearly documented, and identified by author.

### ***C. Groundfish Management***

#### **4. Observer Data and Model Implementation**

Dr. Jim Hastie from the National Marine Fisheries Service Northwest Fisheries Science Center updated the SSC on progress with the bycatch models for the limited entry trawl and fixed gear sectors. Dr. Hastie described revisions to models for both sectors based on recommendations made by the SSC in March 2004 (Exhibit C.4.a, Attachment 3). In addition, for the trawl bycatch model:

1. Lingcod discard mortality was revised downward from 70% to 50%.
2. Catch histories from retired permits (following buyback) were transferred to recently acquired permits.

For the fixed gear bycatch model, following SSC recommendations, bycatch rates have been estimated separately for pot and longline gears. According to Dr. Hastie, the percentage split in landings between these gear types has been similar over time in the observer data for the limited entry fixed gear sector. The percentage split for the limited entry sector has been applied to the open access fishery in the bycatch model.

The SSC discussed how to incorporate bycatch estimates into the stock assessment process and emphasized the need for consistency in these estimates across all species for the upcoming assessment cycle. These issues, and appropriate stratification of data for both trawl and fixed gear sectors (e.g., depth and time of year), should be resolved before the data workshop planned for July 2004.

## 6. Groundfish Essential Fish Habitat Environmental Impact Statement Analytical Model

Mr. Steve Copps presented a brief summary and progress reports on the development of the Essential Fish Habitat-Environmental Impact Statement (EFH-EIS) analysis at both the March and April, 2004 Council meetings. In March, the groundfish subcommittee reviewed their report for the SSC that summarized their February 23-24, 2004 meeting with the EFH model development team (Exhibit C.6.c, Attachment 1).

There are two components to the EFH Analysis; (1) designation of EFH and (2) determination of fishing impacts. Both components utilize a Geographic Information System (GIS) platform that allows presentation of disparate datasets in an intuitive visual format that allows for real time data processing and display. EFH designation reflects the likelihood of occurrence of each species by depth, latitude, and substrate type. The greatest obstacle in developing a methodology for designating EFH is in constructing a comprehensive coastwide database applicable to all species in the groundfish fishery management plan (FMP). This requirement severely limits the possible approaches for designating EFH. For example, while detailed habitat and species associations are available from submersible surveys, these data are restricted spatially precluding their use coastwide.

### EFH Designation Tool

Despite the limitations of available data, the SSC endorses the use of this analytical tool and the underlying data as the best available science for evaluating EFH. The SSC notes the model development team has assembled the most comprehensive dataset of bathymetry and substrate ever compiled for the West Coast, which will be a valuable resource in the future.

Notwithstanding this endorsement, the SSC is concerned that uncertainty in the underlying data on species' depth and habitat preferences will not be reflected in the final GIS output maps. The distribution and habitat preferences of some species are well known, while others are poorly known. However, the output from the model (GIS maps) will be similar regardless of the quality of the underlying data. The SSC recommends that each output map contain an expression of the uncertainty, even if only qualitative, and this be considered in EFH designation.

There are a number of weaknesses inherent in the model as it currently exists. These are outlined below:

Biogenic habitat is both of potential importance and potentially susceptible to fishing impacts. The current model does not consider some of these habitats (e.g., corals, sponges, sea pens) in EFH designation. While this reflects the lack of comprehensive data on the distribution of these species, this, nonetheless, remains a concern.

The use of presence-absence information rather than relative abundance may result in failure to detect EFH with precision. For example, a species may have a broad depth or geographic distribution, but may only reach high densities in a limited area.

Species that exhibit seasonal movement patterns by depth or latitude may not be adequately characterized by presence-absence data from trawl surveys. For example, the inshore winter spawning and nesting grounds of lingcod would not be identified as EFH using summer trawl

survey data.

Existing surveys have a strong bias towards habitats that can be trawled. Thus, species associated with untrawlable habitat will not be adequately sampled. Likewise, juvenile fish are not well sampled by trawl surveys, and their distributions and habitat preferences are often poorly known, yet these may be the most critical life history stages. Biogenic habitats may provide refugia from predation for juvenile stages, but these habitats would not be identified as EFH if the sampling gear does not capture juveniles.

Many species occupy different habitats at different life history stages. Information about these ontogenetic shifts present in the trawl data is not being utilized in the present analysis. Therefore, while presence-absence analyses should be relatively robust, EFH designations resulting from such analyses are initial approximations that will need to be refined as additional information becomes available. The SSC notes that the model is constructed to allow for these updates and refinements, and considers this one of the strengths of the current approach.

### Fishing Impacts Model

The fishing impacts model is still under development, thus the SSC is unable to provide a review at this time. The fishing impacts model has two components; (1) determining fishing effort by gear type and area and (2) determining impacts of gear on habitat.

Based on the current status of the model and the time frame for EFH designation, the SSC cautions there may not be sufficient time for an adequate SSC review and/or response by the model development team before the June Council meeting. Further, since the date and location of the review have not yet been scheduled, but must take place no later than May, the SSC cautions that it may not be possible for the groundfish and economic subcommittees to meet on such short notice. The SSC also notes that extensive data limitations (e.g., no coastwide data on distribution and intensity of fixed gear or recreational fishing) may preclude the use of the model to determine gear impacts on habitat. Rather, the SSC recommends that the model development team consider what questions the current version of the tool can answer, and, if necessary, develop an alternative strategy for evaluating fishing impacts on EFH and that the latter be available in sufficient time for SSC review.

### 8. Preferred Alternative Harvest Levels for 2005-2006 Fisheries

The SSC reviewed the “Groundfish Management Team Recommendations for the Range of 2005-2006 Harvest Levels.” The SSC discussion centered primarily on lingcod and cabezon, because revised assessment results are available for these two species. The GMT appears to have developed harvest ranges for these species that are consistent with the revised assessment results.

Regarding lingcod, the SSC again discussed the potential merit of separate northern and southern area management. Separate area management can help to avoid local area depletion when one geographic portion of a stock is less productive than another. This appears to be the case with lingcod, where data indicate the southern portion of the stock is less productive than the northern portion of the stock. The SSC notes the GMT proposal for splitting the sport fishery harvest guideline between the two areas has merit in this regard, especially when one considers the current allocation is approximately 70:30 (sport:commercial) in the south. Splitting the

commercial harvest guideline between the two areas could also be potentially beneficial. The SSC notes the GMT proposes to use trawl survey data to modify the management area split from that presented in the assessment (the Eureka/Columbia International North Pacific Fishery Commission border) to the California/Oregon state border. This approach seems reasonable given the available data.

With respect to cabezon, the SSC notes the 2004 catch used in the projections (26 mt) is likely to be an underestimate of the true 2004 catch based on the California optimum yield (OY) of 88 mt. This underestimated catch causes the projected 2005-2006 harvest levels to be overestimated, particularly for the 60-20 option. The SSC recommends that in the future, rebuilding analyses should incorporate the most recent available data for developing catch projections.

The SSC observed that Table 1 (Exhibit C.8.b) indicates that for Pacific Cod, Other Flatfish, and Other Fish, the low OY option represents 50% of the established ABC. This adjustment is consistent with past Council options for species groups where quantitative assessments were not available.

#### 11. Stock Assessment Planning for 2007-2008 Management

Dr. Elizabeth Clarke presented a revised groundfish stock assessment schedule for 2005 to the SSC, which included changes to the previous list of species (March 2004, Exhibit E.3.b, Attachment 1, Table 1) resulting from recommendations by the Council's advisory bodies. The current proposal identifies a lead agency for 23 species, of which assessment authors have been identified for all but blackgill rockfish. A full assessment would be required for 17 species; six species would be updated assessments, one of which (yelloweye rockfish) would be carried forward as an update with provision to accommodate it as a full assessment, if so warranted.

A few of the proposed species have not been assessed previously, and the SSC notes that it will not be possible to determine whether sufficient data are available to support a full assessment for them until after the assessment work is started. If the available data were not adequate to carry out the planned assessment, a useful alternative outcome would likely be a comprehensive data summary, which would still require stock assessment review (STAR). New information provided by Dr. Clarke included useful criteria for prioritizing the species to be assessed, and the resulting classification of each species. The SSC requested the assessment list for the next assessment cycle be expanded to include those species that have been previously assessed, but are not scheduled for the current cycle, in order to provide a full assessment history of all stocks.

After discussing the stock assessment review workload associated with the proposed assessment schedule, it is apparent the existing STAR process and Terms of Reference cannot adequately accommodate the number of assessments without structural change. The planned update of the Terms of Reference by the SSC Groundfish Subcommittee will allow changes to be made that will match the new process and workload. Expanded roles for the data workshop and modeling workshop should help address some time consuming issues that were formerly examined during STAR panel meetings. Focused subgroups for species with similar data or modeling issues may benefit from additional follow-up workshops. However, the proposed workload of four species per STAR Panel is a considerable increase from the two (or three) species per panel approach that has previously served the review needs of the Council. This raises a concern that an effective review of four species may exceed allotted meeting time. In order to make efficient use of available review time, it may be necessary to require that STAT Teams provide results four to

six weeks prior to the STAR meeting, so that some issues may be resolved through STAR/STAT interaction prior to the meeting, including requests for additional model runs. Despite these changes the level of review may be reduced under the proposed schedule.

The proposed schedule would require five full STAR panels and two update STAR panels. In addition, as a result of discussions with Dr. Clarke, the SSC recommends an 8<sup>th</sup> panel may be created to deal with any assessments where unresolved issues may remain at the conclusion of the regular STAR panel. This “mop-up” STAR panel would be composed of agency representatives and SSC Groundfish Subcommittee members, but not the outside or Center for Independent Experts (CIE) reviewers. Revised Terms of Reference would specify conditions that would trigger the need for further review by the “mop-up” STAR panel.

Since the 2005 process will be a major change from the framework that has worked adequately in the past, the SSC recommends the SSC Groundfish Subcommittee carry out an evaluation at the conclusion. An account of how well the new process functioned would serve to identify any additional changes that might be needed for the next assessment cycle.

#### 12. Fishery Management Plan Amendment 16-3: Rebuilding Plans for Bocaccio, Cowcod, and Widow and Yelloweye Rockfish

Council staff briefed the SSC on the Amendment to the groundfish FMP that contains rebuilding plans for bocaccio, cowcod, widow rockfish, and yelloweye rockfish (Exhibit C.12.a Attachment 1).

The SSC considered whether it is possible to reduce the number of models for bocaccio and widow rockfish, but found no compelling scientific reasons for doing so.

The rebuilding analysis for cowcod is not based on the same rebuilding software as those for bocaccio, widow rockfish, and yelloweye rockfish. While this is unlikely to impact the OYs for cowcod in the short-term, this may not be the case for the long-term. The assessment team tasked with the 2005 cowcod assessment should, therefore, attempt to select a model whose output can be used in the rebuilding software.

The SSC notes that each rebuilding plan needs to include standards for evaluating the progress of rebuilding. These standards need to be developed for use in the assessments that will be conducted during 2005. As directed by the Council, the SSC Groundfish Subcommittee will develop standards and include them in its Terms of Reference for Rebuilding Analyses. This may require a meeting of the SSC Groundfish Subcommittee, particularly if a draft set of standards are to be provided to the Council for revision in September 2004 and final adoption in November 2004. The standards are likely to include a comparison of current stock status relative to that expected under the current rebuilding plan. The SSC therefore recommends that the trajectories of spawning output relative to the target level of  $0.4B_0$  (e.g., Figure 5.10) for each alternative and species be added to Amendment 16-3 in table form.

The SSC notes that the alternatives in Amendment 16-3 are compared in terms of their impacts on fisheries and communities in a qualitative manner. It recommends that future rebuilding plans contain a more quantitative economic analysis of the short-term and long-term cumulative implications of rebuilding. The results of models that estimate Net Present Value for a range of

discount rates and rebuilding probabilities could form the basis for such analyses.

### 13. Groundfish Bycatch Programmatic Environmental Impact Statement

Mr. Jim Glock presented alternatives and supporting analyses in the current draft of the Bycatch Programmatic Environmental Impact Statement (PEIS, Exhibit C.13.a, Attachment 1) to the SSC.

Four of the six alternatives in the PEIS deal primarily with regulatory bycatch. However, guidelines under National Standard 9 of the Sustainable Fisheries Act also require consideration of non-regulatory sources of bycatch. The SSC raised this issue in its statement from September 2003, but it is not clear how the issues of non-regulatory bycatch and discard are addressed in Alternatives 1-4.

Analyses currently in the PEIS are qualitative, which the SSC understands is customary. On the other hand, observer coverage, logbook, and other reporting requirements, as well as levels of enforcement, differ among the alternatives. Quantitative information about respective costs and other practicalities under each of the alternatives is needed for the Council to make an informed choice among alternatives. The qualitative analysis contained in the PEIS does not facilitate this type of choice.

The alternatives entail different levels of bycatch reduction relative to the status quo. However, the PEIS does not currently contain information on current bycatch and discard amounts, though such information is available (e.g., Table 5-5 in Amendment 16-3, Exhibit C.12.a, Attachment 1). The SSC recommends that future work estimate ranges of bycatch reduction, relative to the status quo, for each of the alternatives to better inform decision-making.

Finally, alternatives in the PEIS are combinations of bycatch reduction tools, and the six alternatives seem to be presented in order of increasing restrictiveness. For example, Alternative 6 includes individual quotas, marine reserves, and total retention of catch. The SSC does not see why these three particular management tools would necessarily need to be implemented simultaneously. More generally, it is not clear whether the Council's choice of a preferred alternative would require the use of all tools specified under that alternative, or would merely give the Council flexibility to use any subset of these tools. Therefore, the SSC considers it important to maintain flexibility in developing a suite of management tools that would allow the Council to develop regulatory alternatives that best achieve the purpose of the PEIS (Section 1.3, pages 1-2).

### **Public Comment**

None.

### **Adjournment**

The SSC adjourned at approximately 5 p.m., Tuesday, April 6, 2004.

PFMC  
XX/XX/04



## SSC Subcommittee Assignments for 2004

<b>Salmon</b>	<b>Groundfish</b>	<b>CPS</b>	<b>HMS</b>	<b>Economic</b>	<b>Marine Reserves</b>
Alan Byrne	Steve Berkeley	<b>Tom Barnes</b>	Tom Barnes	<b>Michael Dalton</b>	Tom Barnes
Robert Conrad	Ray Conser	Alan Byrne	Steve Berkeley	Han-Lin Lai	Steve Berkeley
Kevin Hill	Michael Dalton	Michael Dalton	Alan Byrne	Hans Radtke	Ray Conser
<b>Pete Lawson</b>	Martin Dorn	Ray Conser	Robert Conrad	Cynthia Thomson	Michael Dalton
Shijie Zhou	Tom Jagielo	Tom Jagielo	<b>Ray Conser</b>		Martin Dorn
Hans Radtke	Han-Lin Lai	André Punt	Kevin Hill		Tom Jagielo
	André Punt	Shijie Zhou	André Punt		Pete Lawson
	<b>Steve Ralston</b>		Hans Radtke		André Punt
					Steve Ralston
					<b>Cynthia Thomson</b>

**Bold** denotes Subcommittee Chairperson