DRAFT SUMMARY MINUTES
Scientific and Statistical Committee

Pacific Fishery Management Council
Red Lion Hotel at the Quay
East River 1
100 Columbia Street
Vancouver, WA 98660 Room
(360) 750-4911
October 30-31, 2000

Call to Order

The meeting was called to order at 8 A.M. by Chair Cynthia Thomson. Dr. Don McIsaac, Executive Director, provided some opening comments and noted for the Scientific and Statistical Committee (SSC) the key issues where the Council would look to the SSC for guidance. The first tier items included: G.4, G.5, G.6, G.7, F.1, A.5, I.1; second tier items included: A.6, D.2, E.2, A.7, A.10.

The agenda was approved.

Members in Attendance

Mr. Alan Byrne, Idaho Department of Fish and Game, Nampa, ID
Dr. Ramon Conser, National Marine Fisheries Service, La Jolla, CA
Mr. Robert Conrad, Northwest Indian Fisheries Commission, Olympia, WA
Dr. Robert Francis, University of Washington, Seattle, WA
Mr. Tom Jagielo, Washington Department of Fish and Wildlife, Olympia, WA
Dr. Peter Lawson, National Marine Fisheries Service, Newport, OR
Dr. Stephen Ralston, National Marine Fisheries Service, Tiburon, CA
Dr. Gary Stauffer, National Marine Fisheries Service, Seattle, WA
Dr. Gilbert Sylvia, Hatfield Marine Science Center, Newport, OR
Ms. Cynthia Thomson, National Marine Fisheries Service, Santa Cruz, CA
Dr. Shijie Zhou, Oregon Department of Fish and Wildlife, Portland, OR

Members Absent

Dr. Susan Hanna, Oregon State University, Corvallis, OR
Dr. Kevin Hill, California Department of Fish and Game, La Jolla, CA
Dr. Richard Young, Crescent City, CA

Scientific and Statistical Committee Comments to the Council

The following text contains SSC comments to the Council. (Related SSC discussion not included in written comment to the Council is provided in italicized text).

Salmon

Results of SSC Methodology Review

The SSC reviewed two methodologies that are under development: the revised Klamath Ocean Harvest Model (KOHM) and the Coho Cohort Reconstruction project. Progress is good on both projects, but neither will have a product ready for use in the 2001 season setting process.

Mr. Allen Grover (CDFG), Dr. Lloyd Goldwasser (NMFS), and Mr. Michael Mohr (NMFS) briefed the SSC salmon subcommittee on the progress of the KOHM revision. This team has undertaken a thorough reworking of the input data sets and many of the supporting analyses, as well as the KOHM itself. The ocean

coded-wire tag (CWT) database, which is one of the foundations of the model, was checked for accuracy and consistency. A new, corrected data base was created. The SSC recommends the corrected data base be made available through the Pacific States Marine Fisheries Commission (PSMFC). In addition, several freshwater CWT data sets that the KOHM team has assembled should be considered for inclusion on the PSMFC system. Using the revised data sets, along with an age composition analysis (marine and in-river) and a size-at-age analysis, the KOHM team produced a new cohort analysis. Remaining work includes a catch-effort analysis, inclusion of Central Valley and Rogue River stocks in the ocean populations, and creation of the harvest model itself. This project appears to be well conceived, carefully executed, and well documented. Progress is slower than expected due, in part, to the large number of interdependent elements in the analysis and the overall scope of the project. The final products, which will include revised Klamath fall chinook data sets and a new harvest model, should be completed in time for review prior to the 2002 management season.

Mr. Jim Packer of Washington Department of Fish and Wildlife presented a progress report on the coho cohort analysis and coho FRAM development. This project was initiated in 1994 with the goal to revise the base period used in the coho FRAM model to improve the harvest estimates in mixed stock fisheries. Progress to date includes production of historical exploitation rates and contribution rates for stocks and fisheries from 1986 to 1991. Work to be done includes incorporation of the new data set in the structure of FRAM. There are several challenges that remain. Six years of data need to be condensed into a single base period. The new data set has many more stocks and fisheries than the existing model. Stock size predictions are needed for each included stock. The increased resolution of the new model must be reconciled with the capability of tribes and agencies to predict stock size. The new data set has four time periods (January through June, July, August, September through December) compared with 13 for the existing model. The current system of Terminal Area Management Modules will not work with the new data set. This will necessitate development of new techniques for modeling late-season and terminal area fisheries. The new model structure will permit a functional internet interface, simplifying model distribution and coordination of preseason negotiations. Mr. Packer indicated the final model should be ready for review in the summer of 2001 and for the use in fishery management in 2002. In order to conduct that review the SSC will need thorough documentation of the model and the methods used to develop the new data base.

Final Report of the Oregon Coastal Natural Coho Work Group

Mr. Sam Sharr, Oregon Department of Fish and Wildlife (ODFW), reviewed the final draft report "2000 Review of Amendment 13 to the Pacific Coast Salmon Plan" for the salmon subcommittee of the SSC. This report thoroughly addresses two items previously identified by the SSC and Salmon Technical Team as critical to the review:

An assessment of the current status of the Oregon Coastal Natural (OCN) stock towards rebuilding to full seeding of the spawning grounds, and

A review of the marine survival and parental spawner trigger points in the harvest management matrix.

The SSC encourages the proposed changes to the harvest management matrix, because they are based on a peer-reviewed model, reflect conditions that have been experienced in the 1990s, and provide additional protection to OCN stocks when they are at low levels of abundance. Given the continuing depressed status of OCN stocks, the recommendations to expand the harvest management matrix defined in Amendment 13 to include two new parental spawner categories ("Very Low" and "Critical") and one new marine survival category ("Extremely Low") are warranted. The recommended allowable fishery impacts in the new harvest management matrix are consistent with the historical performance of the fishery and provide escapement levels that are consistent with the goal of full seeding of the spawning grounds. The results from the model are difficult to interpret when parental spawner levels are in the "Critical" category. The SSC stresses that when stocks are in the "Critical" parental spawner category there is no biological justification for allowing harvest.

It is important to note that the risks of extinction used in the 2000 review report do not supercede the previous risk assessment developed for Amendment 13 (Appendix C). Although the extinction risks in the 2000 review were developed with the same model used for the original risk assessment in Amendment 13, they were used

only to address issues pertinent to the 2000 review. The assessment developed for Amendment 13 remains the best assessment of the risk of extinction for OCN populations.

Finally, the SSC supports research that focuses on the underlying assumptions of the model, such as ODFW's life-cycle monitoring project. This research, in addition to analyses currently under way, will provide new information that can be incorporated into future reviews of Amendment 13 and the harvest management matrix. We recommend another review be conducted in 2003.

Groundfish

Final Harvest Levels for 2001

Widow Rockfish

The SSC reviewed Appendix B of the widow rockfish stock assessment, which considers alternative minimum stock size/overfishing thresholds for widow rockfish. The report contrasts the default definition of stock status with the results of a new analysis of spawner-recruit (S/R) data, which had not been reviewed by the Stock Assessment Review (STAR) Panel.

The stock assessment results indicate the point estimate of spawning output in 1999 is 23.6% of the unfished level, which is below the fishery management plan amendment 11 default minimum stock size threshold (25%). The approximate 95% confidence interval ranges from 16% to 38.6% of the unfished level. The new S/R analysis estimates B_{MSY} and presents the case that stock status could range from nearly overfished (Ricker model) to healthy (Beverton Holt model).

The SSC finds the results of the new S/R analysis are not adequate to reliably characterize widow rockfish stock status. The S/R data used in the analysis are not sufficiently informative to describe a meaningful stock-recruit relationship, and some of the results of the S/R analysis are not internally consistent with the results of the stock assessment. In particular, it is difficult to reconcile the Beverton Holt model results with the long term decline in spawning biomass and recruitment shown by the stock assessment.

The SSC encourages further S/R work for widow rockfish and other species. It is important to consider a variety of potential S/R relationships, and modeling should provide likelihood profiles of the steepness parameter. It would be useful if the analyses could be presented together with stock assessments to assure internal consistency of the results and to get the maximum benefit from a full STAR Panel review of the work.

While recognizing the uncertainty about the point estimate of stock status, the SSC supports the optimum yield (OY) of 1775 mt recommended by the Groundfish Management Team (GMT) for widow rockfish in 2001, which was derived from an $F_{65\%}$ harvest rate as modified by the 40-10 policy. Projections indicate this policy will result in rebuilding the widow rockfish stock within a ten-year period.

Pacific Ocean Perch

The SSC is concerned the preliminary OY for Pacific Ocean perch (POP) (626 mt) reflects overly optimistic projections of stock rebuilding due to a reliance on potentially untenable stock recruitment assumptions. The new stock assessment indicates an improvement in POP stock status, suggesting that it may be possible to rebuild the stock faster than previously thought, or, alternatively, to obtain higher yields during the period of rebuilding. Until a thorough rebuilding analysis is conducted with the new assessment results, the SSC recommends using the yield projected for 2001, as put forth in the existing rebuilding plan (303 mt) as a lower bound. The SSC further recommends the new stock rebuilding analysis should provide catch projections based on a constant fishing rate and not a constant catch over the rebuilding time period.

Whiting

Biomass estimates produced by the new assessment are very close to the values reported by the 1999 assessment. Some errors were identified in the catch tables of the new assessment; however, the SSC was informed that the correct catch values were used in the stock assessment model, so this error does not affect

the assessment results. The SSC recommends the Council should use the 2001 OY (238,000 mt) as put forth in the previous assessment. Assuming an 80% U.S. share, this corresponds to 190,000 mt.

Darkblotched Rockfish

The OY range is based on uncertainty in the amount of darkblotched rockfish taken in the foreign rockfish fishery. The SSC understands that data are available which may provide an opportunity to better estimate the species composition of the Russian catch in the early years of the fishery. These data should be evaluated, and, if found reliable, should be incorporated into the next darkblotched stock assessment and other applicable slope rockfish stock assessments.

Recreational Fishery Information Network (RecFIN)

The SSC reviewed a report prepared by the RecFIN statistics subcommittee, which evaluated alternative estimators of ocean boat fishing effort and catch in Oregon. The report compared the sampling programs of the NMFS Marine Recreational Fisheries Statistics Survey (MRFSS) and the Oregon Ocean Boat Survey (OBS). The SSC is impressed with the quality of the report and the level of effort put into examining the properties of two recreational fishery survey datasets. The SSC endorses the subcommittee's recommendations for improvements in both surveys, and concurs with their recommendations to 1) use adjusted OBS estimates during periods when the two surveys overlap, and 2) use stratified MRFSS without the freshwater stratum during other periods. The SSC also recommends that ODFW derive variance estimates to accompany past and future OBS estimates of recreational catch.

2001/2002 Groundfish Management Process and Schedule

The SSC discussed the groundfish management process and schedule for the upcoming year. In recent years, the Council's groundfish process has become increasingly more complex with each management cycle. Growing demands on the system coupled with inherently difficult management decisions have taxed all elements of the Council family. Completion of advisory committee documents and analyses needed to support Council decision making is often delayed until late in the calendar year, leaving little time for reflection and discussion. The problems facing the groundfish management process involve many different issues. The SSC is best suited to address STAR issues and looks forward to working with the rest of the Council family on developing long-term solutions for the overall problem.

The STAR process was developed after long and involved negotiations among the Council's groundfish entities, the SSC, and NMFS to resolve the problem of providing independent and comprehensive review of stock assessments. Over the past few years, the STAR process coupled with SSC review has taken on additional responsibilities with the need to review more complex stock assessment models, additional analyses related to rebuilding plans, and harvest policy rate guidelines. The SSC partnership with the STAR coordinator, Ms. Cyreis Schmitt (NMFS) has generally worked well, but the process is being strained under the weight of increasing demand but few additional resources. Long-term solutions may require rethinking the frequency with which assessments are conducted and the need to formally review all stock assessments, as well as other streamlining measures that bring the demand more in line with available resources.

For the short term, the SSC suggests the following:

As indicated in the June 2000 SSC statement, the SSC Groundfish Subcommittee will develop guidelines on the technical aspects of rebuilding plans, based on the experience with such plans to date. These guidelines will facilitate the process of developing and approving rebuilding plans for overfished stocks.

All members of the SSC Groundfish Subcommittee will attend the August 2001 GMT meeting to discuss the 2001 assessments and STAR Panel reports with the GMT and to identify any important loose ends not adequately covered by the STAR Panel reviews.

All stock assessment analyses, including those commissioned by private groups, must be included in the STAR process, including adherence to all terms of reference and the STAR process schedule. In addition, it is critical that assessment documents be completed following the STAR meeting and incorporated into the Council's annual stock assessment and fishery evaluation (SAFE) document.

Sablefish Permit Stacking

Mr. Jim Seger briefed the Scientific and Statistical Committee (SSC) on the completed Draft Analysis of Permit Stacking for the Limited Entry Fixed Gear Sablefish Fishery. The revised analysis includes 1) a description of relevant policies and recommendations from the Groundfish Strategic Plan, 2) a description of the fishery, 3) a qualitative analysis of each option, and 4) social and economic impacts.

The results of the analysis are not substantially different from the September draft report. The general conclusion is that, unless the individual quota (IQ) moratorium is lifted, voluntary permit stacking is not likely to increase the duration of the fixed gear sablefish season, alleviate safety concerns and complex management decisions associated with short seasons, or result in significant capacity reduction. In order to achieve capacity reduction, voluntary stacking will need to be followed by a properly designed IQ system (an uncertain prospect at this time, given the moratorium) or some other stringent capacity reduction mechanism.

The SSC has the following recommendations:

The analysis contains ten key objectives and relates each objective to the appropriate Strategic Plan recommendations, National Standards or Groundfish Fishery Management Plan (FMP) objectives. The permit stacking objectives are sometimes contradictory. For instance, while the objective of capacity reduction is consistent with selecting options that encourage permit stacking, other objectives are consistent with options that would discourage stacking. The analysis could be simplified by focusing on a small number of priority objectives. As a related issue, the SSC also notes that some of the goals and objectives of the Groundfish FMP may not be consistent with the Strategic Plan. The SSC recommends the FMP be revised to incorporate Strategic Plan objectives and that FMP objectives be prioritized; this would be useful not just for evaluating permit stacking options but for evaluating options contained in future FMP amendments.

Transitioning to an IQ program is a recommendation of the Groundfish Strategic Plan. The SSC recommends the Council evaluate the permit stacking options in terms of whether they would accommodate a smooth transition to an IQ program. In other words, in considering options pertaining to restrictions on concentration of permits, restrictions on permit ownership, and permit-on-board and U.S. citizenship requirements, it would be helpful to consider whether such provisions are also what the Council would like to see in an IQ program.

Given existing uncertainties regarding whether the various sets of options will encourage permit stacking, the SSC recommends the Council evaluate the program after one year to determine its effectiveness and consider revising options if the program is not meeting key objectives. As part of this evaluation, we recommend that transaction prices as well as permit ownership be tracked over time. Because prices reflect the expectations of permit holders regarding current and future earnings in the fishery, they would be a key indicator of the success of the stacking program.

Many of the objectives and options in the analysis focus on social, economic, and community effects. This emphasis reinforces the need for additional social science expertise within the Council family to evaluate such effects.

Council Administrative and Other Matters

Research and Data Needs and Economic Data Plan

Mr. Jim Seger briefed the SSC on the status of two draft documents: Research and Data Needs and West Coast Fisheries Economic Data Plan, both dated October 2000. The current drafts reflect the changes proposed by the SSC at the September meeting. The SSC would like to see one additional minor modification to Research and Data Needs. The first sentence in the third bullet under "Slope Surveys" (page 9) should be reworded as follows: "Establish regular pot or longline surveys for sablefish, conducted at appropriate depths and coordinated and standardized coastwide." Once that change is made, the SSC recommends that both documents be adopted by the Council.

Coastal Pelagic Species

Pacific Sardine Harvest Guideline

A summary of the Pacific sardine stock assessment for 2001 was presented to the SSC by Dr. Ray Conser. The SSC finds the assessment and recommendations to be adequate for setting harvest levels at this stage of the fishery. Future assessments may be inadequate for the northern range of the stock if appropriate time series data for the northern areas are not incorporated into the assessment.

The discussion that followed was a good update on the status of Pacific sardines and the assessment methodology, but was not an in-depth peer review. The data sources for sardine are limited to geographic areas off Baja California, Mexico, and the State of California (particularly the area from San Diego to Monterey Bay). A migration model parameterized with historical estimates of sardine migration rates is used to extrapolate the stock assessment to the northern areas of the sardine distribution. With the recent expansion of the sardine population off Oregon, Washington, and British Columbia, there is an urgent need to incorporate fishery-dependent data for northern areas into the stock assessment and to initiate resource surveys to establish a fishery-independent time series for those areas. It will be very important that monitoring be coordinated, consistent, and compatible between northern and southern areas.

In response to an earlier SSC request, the Coastal Pelagic Species Management Team (CPSMT) has recommended a peer review process for the coastal pelagic species similar to the groundfish STAR process. The CPSMT suggests that full sardine and Pacific mackerel stock assessments and reviews be conducted on a triennial cycle, with a less formal review by the CPSMT and SSC during interim years. Full stock assessment reports would be developed and distributed following each STAR panel review. Details from interim-year assessments could be documented in executive summaries similar to the one produced for this year's sardine assessment. As entirely new assessments are developed, a STAR panel would be convened to review the assessment prior to implementation of results for setting harvest guidelines. The SSC supports the CPSMT's proposal. The SSC Coastal Pelagic Species Subcommittee is willing to work with the CPSMT to develop the terms of reference for a STAR process and guidelines for stock assessment documents. The SSC suggests the first such review be scheduled for 2002, given that a major review of squid assessment methodology is scheduled for 2001. A 2002 CPS review should be scheduled to avoid overlap with the groundfish STAR review process.

Public Comment

There was no formal public comment.

Adjournment

The SSC adjourned at approximately 4:30 P.M., Tuesday, October 31, 2000.

PFMC
02/20/01