SUMMARY MINUTES
Scientific and Statistical Committee

Pacific Fishery Management Council
Doubletree Hotel - Columbia River
Rogue Room/Deschutes Room
1401 North Hayden Island Drive
Portland, Oregon 97217
(503) 283-2111
March 5-6, 1999

Call to Order

The meeting was called to order at 8:10 a.m. by Chairman, Dr. Peter Lawson. Executive Director, Mr. Lawrence D. Six, led introductions and welcomed new Scientific and Statistical Committee (SSC) members. Mr. Six also reviewed items on the Council agenda for which the SSC comments to the Council would be particularly important, salmon methodology reviews (B.2.), and the salmon plan amendment (B.6.). The agenda was approved with a change to allow more time for the salmon plan amendment discussion (B.6.) and less time for the nonretention policy committee discussion (B.7.).

The minutes of the September and November meetings were approved. Any further comments on changes to the minutes should be forwarded to Council staff. The SSC made new subcommittee assignments. The revised list is attached to the end of the minutes.

Members in Attendance
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, Newport, OR
Dr. Robert Francis, University of Washington, Seattle, WA
Dr. Susan Hanna, Oregon State University, Corvallis, OR (absent on Tuesday)
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. Stephen Ralston, National Marine Fisheries Service, Tiburon, CA
Dr. Gary Stauffer, National Marine Fisheries Service, Seattle, WA
Ms. Cynthia Thomson, National Marine Fisheries Service, Santa Cruz, CA
Dr. Richard Young, Crescent City, CA
Dr. Shijie Zhou, Oregon Department of Fish and Wildlife, Portland, OR

Members Absent
Dr. Gilbert Sylvia, Hatfield Marine Science Center, Newport, OR

Scientific and Statistical Committee Comments to the Council

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

Salmon Management

Review of 1998 Fisheries and Summary of 1999 Stock Abundance Estimates

Dr. Robert Kope reviewed the 1998 Ocean Salmon Fisheries and the 1999 stock abundance estimates for the SSC. He alerted the SSC that the 1998 California Central Valley (CVI) natural fall chinook adult total was incorrect, because the Feather River adult return was not included (Table B-1, in *Review of 1998 Ocean Salmon Fisheries*). In addition, the Feather River adult return appears to be too high and needs to be validated. These errors may affect the 1999 CVI preseason forecast.

The preseason estimate for Oregon Production Index (OPI) coho is 620,800 adults, an increase of 274% from the 1998 preseason estimate and 166% above the 1998 postseason estimate. Oregon Coastal Natural (OCN) coho are a component of the OPI with a preseason estimate of 60,700 adults, an increase from both the 1998 preseason estimate of 47,200 fish and the 1998 post season estimate of 29,200 adults. However, the OCN preseason estimate is 42,200 fish less than the brood that produced it. If this prediction holds true, then this will be the third consecutive year the OCN adult returns will be less than the parent spawners.

The Klamath River fall chinook has a minimum escapement of 35,000 adults. It appears that the stock is being managed to achieve the minimum escapement. In four of the past five years, the actual adult return was less than its preseason forecast. Basing management decisions on the minimum level leaves little or no room for errors in the preseason abundance estimates if the escapement goal is to be exceeded.

Estimation Procedures and Methodologies

Revision of OCN Escapement Estimates

Mr. Curt Melcher gave a brief presentation to the SSC on the proposed revision of OCN coho salmon escapement estimates. He reviewed the history of escapement estimation and the methodology used to rescale traditional index survey estimates to be comparable to stratified random survey (SRS) estimates. The SSC reviewed this issue in November 1998 and made several recommendations. Oregon Department of Fish and Wildlife re-analyzed the data, incorporating SSC recommendations, in time for SSC Salmon Subcommittee review in January 1999. The SSC Salmon Subcommittee accepted the proposed methodology and agreed on additional changes to be implemented in time for the Oregon Production Index Technical Team to use in 1999 predictions. The OCN spawner database has been rescaled from 1970 to 1989. The OPI database from 1970 to present is now expressed in terms of SRS estimates. This has also resulted in changes to hatchery estimates.

The SSC supports the SSC Salmon Subcommittee's recommendations made in January. However, the SSC has concerns for those years in which the escapements exceed the range of the observed values since 1990, the first year of SRS escapement estimates. The SSC recommends that if such high escapements occur in the future, they should be included in the conversion model to improve estimates for high escapement years.

Currently, both traditional index and SRS estimates are used for fishery management programs such as the coho Fishery Regulation Assessment Model (FRAM). We support the use of only one data set (SRS) rather than two for coho management. The SRS results were intended for use in the coho FRAM in 1999, but this did not occur due to time limitations. The SRS data will be incorporated into the coho FRAM in 2000.

Chinook FRAM changes

Mr. Larry LaVoy and Ms. Kristin Nason presented changes in the chinook FRAM to the SSC. These changes include: adding new stocks, adding new tag codes, increasing fisheries by splitting existing fisheries, and changing the model time frame. Most of the changes were designed to improve modeling of Puget Sound fisheries.

Three new stocks (South Fork Nooksack spring, White River spring, Lower Georgia Strait and Fraser early) were added to improve the representation of fishery catches. These additions have virtually no impacts on the stock composition of Council fisheries.

Two new years of tag code data were added for several stocks, which improve the representation of these stocks in the model and update the impact analysis. The additional tag data for the Fraser River late stock substantially changed the model estimates of stock composition in the treaty and non-treaty Area 3:4:4B troll fisheries. The proportion of the Fraser late stock in the base period catch was reduced from 31.6% to 13.4% in the treaty fishery, and from 9.3% to 4.0% in the non-treaty fishery. This results in an increase of model catch on other stocks, e.g., the catch on Bonneville Pool and Spring Creek tule increased from 19.7%

to 27.9% in the treaty troll fishery.

The Area 10/11 sport fishery was split into the Area 10 and Area 11 sport fisheries, and the Georgia Strait sport fishery was split into three fisheries. These splits will make modeling proposed regulations easier and the model will more effectively capture different stock compositions in different areas. The changes have no impacts on Council fisheries.

The single-year (January through December) time structure was changed to a 19-month (October to following April) time frame. The new time structure fits better with management seasons and improves the estimates of fishery impacts on current year's escapement. In the new time structure, stock impacts are summed for May through April (12 months). Therefore, the exploitation rate indices and total mortalities from the model output still reflect only the May through April management year. The change in time structure has no impacts on model representations of Council fisheries.

During this agenda item, the SSC reiterated its procedures for submitting documents for SSC review. The SSC requested Council staff to uncover that language and ensure it is distributed to people submitting documents for SSC review. The statement from the April 1997 meeting was not resubmitted at this Council meeting, but states:

> The current list of [methodology] reviews will place a substantial load on the SSC salmon subcommittee. To make the most efficient use of the subcommittee's time, the SSC requires good documentation and ample review time. Agencies should be responsible for insuring that materials submitted to the SSC are technically sound, clearly documented, and identified by author. Documents should receive internal agency review before being sent to the Council. To provide adequate review time, materials must be received in the Council office at least three weeks prior to scheduled review meetings.

Plan Amendments, Including Essential Fish Habitat

The SSC reviewed the draft salmon amendment 14 document and has the following comments.

Regarding overfishing criteria, the amendment provides for two mechanisms to trigger Council action: a "Conservation Alert" and an "Overfishing Concern" process.

A "Conservation Alert" would take effect if, during the annual preseason process, a natural stock listed in Table 3-1 is projected to fall short of its conservation objective. If the Council should decide not to shut down all fisheries that could potentially harvest a stock which triggers a conservation alert, it should specify explicitly what level of incidental catch will be permitted. Failure to do so could later trigger an "overfishing concern," and thus require a rebuilding plan.

An "Overfishing Concern" is triggered if, in three consecutive years, the postseason estimates indicate a natural stock listed in Table 3-1 has fallen short of its conservation objective. Presently, natural stocks which have had less than five percent exploitation by Council-managed fisheries are not included in Table 3-1. The SSC recommends that flexibility should be provided to allow for the addition or removal of stocks from the table as needed on the basis of a technical review to avoid the need for future plan amendments to make such changes.

The SSC notes it is not clear how Endangered Species Act (ESA) requirements will dove-tail with the stock rebuilding requirements of amendment 14. The SSC recommends that, for stocks of concern, the more conservative of the two standards (ESA versus amendment 14) shall apply.

The SSC notes the Council will need to employ appropriate fishery harvest models to accommodate effective management of selective fisheries. The SSC is also concerned that there is uncertainty associated with many of the parameters needed to model selective fisheries. This could lead to an underestimate of fishery impacts.

Nonretention Mortality - Ad-Hoc Committee Report

The SSC strongly endorses the six recommendations specified in the Minutes and Report by the Ad-Hoc

Committee for Salmon Nonretention Mortality (Attachment B.7.a.). We encourage directors of state, federal, and tribal fishery management agencies to allocate the personnel necessary to address each of these recommendations. Effective management of selective fisheries will be impossible until these issues are addressed. Meanwhile, the SSC recommends a cautious approach to the implementation of selective fisheries.

Groundfish Management

Final Harvest Limits for Pacific Whiting

Dr. Ray Conser presented an overview of the 1999 Pacific whiting stock assessment process, in particular the most recent Stock Assessment (STAT) Team report, the report of the joint Canada – U.S. review group, and the Groundfish Management Team (GMT) recommendations for 1999 and 2000 acceptable biological catch (ABC) and optimum yield (OY). The SSC would like to highlight the following:

The whiting fishery is recruitment-driven. High stock levels of the past 10 to 15 years have been driven by two very large year classes which recruited in the 1980s.

Stock biomass has declined and then leveled off over the past decade as these exceptional year classes have died out.

The way recruitment is estimated has a significant impact on fishery projections (especially the year 2000 catch projections). For the first time, this year's stock assessment incorporated prerecruit surveys (Tiburon rockfish survey) to project future recruitment.

Current stock assessments are strongly determined by National Marine Fisheries Service (NMFS) acoustic survey estimates (in particular the last three triennial surveys).

This year, the GMT has recommended a more conservative harvest policy ($F_{40\%}$) than what has been used previously. This is based on the meta analysis presented in the STAT Team report.

For a number of years, once an overall whiting total allowable catch (TAC) has been determined, the practice has been to allocate 80% to the U.S. fishery and 34% to the Canadian fishery (total allocation of 114% TAC). From 1991 to 1998, the total whiting harvest has exceeded ABC by an average of 15%.

The SSC has the following general comments on the assessments and projections:

The whiting stock assessment is of extremely high quality. Assessment scientists are to be commended.

The use of pre-recruit surveys improves the quality of the stock assessments, in particular the stock projections. The SSC encourages further refinement of pre-recruit survey methodology.

This year, a new stock assessment model, using AD Model Builder, was employed in the whiting stock assessment. The STAT Team report presents an excellent comparison between the old (Stock Synthesis) and new methods. The SSC is reassured that the two methods provide similar assessments and encourages all future stock assessments that change models to present similar comparisons.

The SSC supports the GMT rationale for employing a more conservative $F_{40\%}$ whiting harvest policy in combination with the 40-10 precautionary reduction in OY. This change is supported by the meta analysis (STAT Team report) and the joint U.S.- Canada review panel.

The joint U.S.-Canada stock assessment review is very helpful. The SSC strongly recommends whiting technical management objectives be the same on both sides of the border. In addition, once total TAC is jointly determined, harvest allocations should be based on no more than 100% of that TAC. This allocation issue is of greater significance to the conservation of the stock than any savings resulting from precautionary management.

Consistency of California Rockfish Size Limits with Fishery Management Plan

The SSC reviewed materials assembled by the State of California, which is seeking a finding of consistency of new state-enacted minimum size limits for nine nearshore species with the objectives of the groundfish fishery management plan and the national standards of the Sustainable Fisheries Act. The SSC found the report to be lacking in detail to determine whether the proposed regulations have sufficient merit to proceed with a determination. Of particular concern is the absence of any discussion or data supporting the assumption of negligible mortality of released, undersized fish. A significant "shaker" mortality could offset any conservation benefit from discarding sub-legal fish. Also, the SSC was concerned that the new size regulations would be difficult to enforce in the live-fish fishery, which is distributed diffusely along the West Coast and involves many small-boat fishers. As a consequence, the agency's report in support of the consistency determination needs further documentation regarding the level of enforcement that will be needed to insure the new size limit regulations are effective.

Public Comment

There was no public comment.

Adjournment

The SSC adjourned at approximately 5:30 p.m., Tuesday, March 6, 1999.

Research and Data Needs (ongoing list)

1. Systematic review of salmon run-size predictors; evaluation of forecasts through hindcasts. (Resulting from March 1997 discussion on stock abundance estimates and preseason forecasts.)

2. Localized depletion of groundfish stocks, especially Dover sole and shortspine and longspine thornyheads, may occur at low abundance levels. The SSC recommends the GMT consider using area-specific harvest guidelines for these species. (From November 1997 discussion on 1998 harvest levels.)

3. It may be possible to increase harvest levels while still meeting target mortality fishing rates such as $F_{35\%}$ by deliberately managing the range of age and lengths targeted by the fishery. For example, avoiding capture of young Dover sole who have not yet realized their entire growth by shifting fishing effort in deep water might make larger catches possible. Effects on enforcement and other species would have to be considered. (November 1997.)

4. A recruitment survey for whiting would help reduce uncertainty in the stock assessment. (The SSC agreed that a more comprehensive discussion of research needs to support groundfish stock assessments was necessary, including how to integrate social and economic analyses into the assessment and how to analyze management histories from the assessments.) (November 1997.)

PFMC
03/30/99