

**B.2.d. Council Action: Approve Methodology Changes for 2001**

There were no methodology changes for the Council to approve.

**B.3. Final Report of the Oregon Coastal Natural Coho Work Group**

**B.3.a. Agendum Overview**

Dr. Coon provided an overview of the Agenda item (Exhibit B.3, Situation Summary).

**B.3.b. Report by Work Group Leader**

Mr. Sam Sharr, Oregon Department of Fish and Wildlife (ODFW), summarized the Oregon coastal natural (OCN) coho review and provided the work group's recommendations:

*Based upon the results of our analyses the consensus of the OCN Work Group is that the following changes to the management matrix in Amendment 13 will reduce the risk of extinction and improve the likelihood of recovery for OCN coho:*

- *Add "Critical" and "Very Low" parental spawner categories to the matrix. "Critical" is defined as spawner densities less than four fish per mile in the Northern, North-Central, and South Central sub-aggregates, and as less than 12% of full seeding in the Southern sub-aggregate. "Very Low" is defined for each sub-aggregate as greater than "Critical" but less than 19% of full seeding.*
- *Retain the "Low", "Medium" and "High" parental spawner categories as defined in the existing matrix (i.e. >19% and ≤50% of full seeding, >50% and ≤75% of full seeding, and >75% of full seeding, respectively).*
- *Eliminate the provision that prevents moving to a higher harvest rate based upon one major basin having less than 10% of full seeding.*
- *Define the spawner abundance status of OCN coho based upon the status of the weakest sub-aggregate as determined by the aforementioned criteria.*
- *Add a new "Extremely Low" marine survival category that has an OPI hatchery jacks:smolts ratio of less than 0.0008.*
- *Re-define the "Low" and "Medium" survival categories. OPI hatchery jacks:smolts ranges that define the two categories should be 0.0008 to 0.0014 and greater than 0.0014 to 0.0040 respectively.*
- *Retain the existing "High" marine survival definition as an OPI hatchery jacks:smolts ratio greater than 0.0040.*
- *Adjust allowable fishery impact rates in the matrix consistent with results of the Nickelson/Lawson habitat based production model.*

In response to questions, Mr. Sharr stated that the risk assessment of the original Amendment 13 is not superseded by the work group review. The risk assessment is still valid and the extinction probabilities have not changed.

**B.3.c. Report and Comments of Advisory Bodies**

**STT**

Dr. Gary Morishima gave the report of the STT.

*The Salmon Technical Team (STT) appreciates the work that went into the report of the Amendment 13 Review Committee.*

*Clarification of the technical basis for the Committee's recommendations: The report presents results from the Nickelson-Lawson Model and a simplified deterministic version of that model as the basis*

for proposing a new decision matrix containing limitations on allowable exploitation rates. The report is not clear as to the details underlying the various technical analyses presented. The STT, therefore, recommends a technical appendix describing the detail underlying the derivation of the proposed decision matrix be produced. The appendix should provide an explanation of modeling decision points and modeling details that support the proposed new decision matrix so it can be understood and followed. Additionally, the appendix should include derivation of the model parameters for the original decision matrix established by Amendment 13, as requested by the STT and Scientific and Statistical Committee (SSC) (Amendment 13 should be attached for reference since it is referenced extensively by the Committee's Report).

Potential confusion and misinterpretation of "extinction risk": There is some potential for confusion and misinterpretation regarding the "extinction risk" presented in the report. An extinction risk analysis was completed prior to Council adoption of Amendment 13. The "extinction risk" presented in this review should not be interpreted as a substitute for or an update of that analysis. The extinction probabilities shown in Figure 9 were contrived in an attempt to generate relationships between model-estimated spawners per mile and the risk of extinction four generations later. The relationship represents model results under the assumption of prolonged periods of constant, low marine survival rates; additionally, the definition of "extinction" differs significantly in the two analyses (.05 spawners per mile over four generations in the committee's review versus 50 spawners per basin over 100 years in the Amendment 13 Risk Assessment). The relationships depicted in figure 9 should not be interpreted as true risks of extinction under actual conditions. The original risk analysis examined the risk of extinction at 0% harvest rate and the harvest rates prescribed by the matrix in Amendment 13 with a minimum harvest rate of 13%. The committee did not complete an "extinction risk" analyses comparable to that provided for Amendment 13; however, the 8% maximum exploitation rate proposed by the Committee at critical parental escapements should produce extinction risks within the bounds depicted in the Amendment 13 assessment of extinction risk.

Modified decision matrix: The STT supports the addition of the critical parental spawner status and extremely low projected marine survival rates to provide additional guidance in responding to conservation concerns. However, the STT notes that the 8% exploitation rate limit allowed under critical parental stock status is somewhat arbitrary. This rate represents the lowest preseason rate anticipated by the regulations adopted by the Council in recent years; no significant modeling or biological thresholds can be attached to this rate. The STT is concerned that application of the 8% exploitation rate limit uniformly across all expectations of marine survival may not be appropriate or consistent with the objective of achieving full seeding of high quality habitat (defined at an assumed marine survival rate of 3%). Of particular concern is the application of the limit at medium and high marine survival rates. While there is increased uncertainty regarding compensatory effects at low spawning densities and some uncertainty regarding production response at critical parental escapement and medium to high marine survival levels, the STT notes that such events have occurred historically. The STT recommends that the committee reconstruct historical production to provide an indication of what production response might be expected under such conditions. The STT also wishes to note that a limitation of exploitation rates at 8% at medium and high survival rates will increase the contentiousness of allocation issues that come before the Council. At critically low parental escapement levels and low projected marine survivals, the STT concurs that an 8% exploitation rate would likely delay the attainment of the full seeding objective. At very low projections of marine survivals and critical parental spawning escapements, the STT concurs that there is no biological justification for harvest of the OCN stock.

Modeling capacities: The STT notes that application of the deterministic Nickelson-Lawson model to individual sub-aggregates produces inconsistent results. This simplified model overpredicts spawning escapement in the north and north-central sub-aggregates while underpredicting production in the south-central and southern sub-aggregates. This could be due to a variety of factors, including differences in marine survival rates or fishery impacts, two critical elements that are assumed invariant under Amendment 13. Currently, the STT does not have the capability to evaluate differences in fishery impacts between the sub-aggregates if they exist; marine survival differences between sub-aggregates would require revision of Amendment 13.

## SSC

Mr. Bob Conrad presented the SSC report.

*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 Scientific and Statistical Committee (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.*

## SAS

Mr. Cedergreen gave the report of the SAS.

*The Salmon Advisory Subpanel reviewed the final draft of the 2000 Review of Amendment 13 to the Pacific Coast Salmon Plan.*

*The recommendations presented on page 32, and in Table 6 on page 30, have substantial allocation implications. Other than the last paragraph of the Executive Summary on page V, there is no discussion regarding the allocation of proposed reductions under "Critical Parent Spawner Levels" and low levels of marine survival. However, we generally support the direction of the report.*

*Our recommendation would be to at least adopt the report as an advisory document.*

#### **B.3.d. Public Comment**

Dr. Stan Gregory, IMST, Oregon  
Mr. Mark Cedergreen, Westport Charter Boat Association, Westport, Washington  
Mr. Paul Englemeyer, National Audubon Society, Yachats, Oregon

#### **B.3.e. Council Action: Consider Adopting Technical Adjustments to Amendment 13**

Mr. Boydston noted that if there is no biological justification for harvest when the OCN coho stock is in the lower matrix levels, then likewise there should be no allowable habitat impacts as well.

Mr. Anderson asked Mr. Sharr how the work group would address the STT comment that the 8% exploitation rate limit is somewhat arbitrary and they are concerned about using it across the board. Mr. Sharr stated that the work group had discussed at great length how to deal with our lack of knowledge about the population behavior at critically low levels. In the absence of being able to predict it, the sense of the work group was you have to see some positive ("show me") results before the harvest rates get cranked up.

Mr. Bohn recommended the Council accept the report of the work group as biological guidance to incorporate and use along with the existing Amendment 13 for the next two or three years. Another review could be instituted in 2003 as suggested by the SSC. In the interim, the work group could put together the information the STT requested in the first paragraph of their statement (i.e., "The STT, therefore, recommends a technical appendix describing the detail underlying the derivation of the proposed decision matrix be produced. The appendix should provide an explanation of modeling decision points and modeling details that support the proposed new decision matrix so it can be understood and followed."). He would also like to see the work group look further at the habitat model and report back on that information probably by the March meeting.

Mr. Bohn clarified that the work group report would be for guidance in addition to Amendment 13. It would not replace the current matrix of Amendment 13 since there is some disagreement on the technical details of the new matrix. As ocean conditions turn around, more information will be available from which to judge the matrix decision points. Mr. Bohn believes the Council is not ready to do the allocative type of process by next March for the 2001 fisheries which adopting the new matrix could trigger. Mr. Anderson agreed that the work group should address the technical issues raised by the STT and SSC, but they are not the appropriate group to consider the social and economic ramifications of a new matrix.

As proposed by Mr. Bohn, the Council agreed to accept the report of the OCN Coho Work Group as additional information to be used in conjunction with the harvest matrix of Amendment 13 and to request that the work group answer the technical questions of the STT (Motion 2).

#### **B.4. Progress Report on Review of Queets Wild Coho Status**

##### **B.4.a. Agendum Overview**

Dr. Coon presented the situation summary.

##### **B.4.b. Report of Tribes and Washington Department of Fish and Wildlife**

Mr. Anderson reported that he has not met with the Quinalts on this issue, but that Dr. Morishima will be working with Mr. Doug Milward and appropriate staff to pull together the basic data necessary for the review. Once the basic data is assembled, it can be presented to the Council, possibly by March, with a draft report completed by the June Council meeting.

Mr. Harp clarified that he does not speak for the Quinault Indian Nation on this issue. He knows there is an outline draft in development which the STT has discussed. He has reviewed the outline draft and believes the schedule that Mr. Anderson has mentioned would probably work out. The information for the escapements for the 2000 fishery should be available by January.