

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
FISHERY MANAGEMENT PLAN AMENDMENT 16, ANNUAL CATCH
LIMITS AND ACCOUNTABILITY MEASURES

The Scientific and Statistical Committee (SSC) met with Dr. Peter Dygert of the Salmon Amendment Committee (SAC) to discuss the current “Draft Environmental Assessment for Pacific Coast Salmon Plan Amendment 16: Classifying Stocks, Revising Status Determination Criteria, Establishing Annual Catch Limits and Accountability Measures and *De Minimis* Fishing Provisions”. The SSC reviewed an earlier draft of this document at the June Council meeting (Agenda Item C.1.b, Supplemental SSC Report).

The SSC commends the SAC on producing, in a relatively short amount of time, a document that covers a broad range of topics. The current draft is greatly improved and addresses most of the SSC concerns from the previous draft, including:

- The proposal should include a process for the SSC to recommend overfishing limits (OFLs) and acceptable biological catches (ABCs) to the Council based on pre-season estimates: A section of the document (page 48) now specifically addresses this topic. Further discussion of this issue occurred at this meeting between the SSC and members of the SAC and Salmon Technical Team (STT). It was suggested that two tables could be provided in future versions of Pre-season Report I that are prepared by the STT. The first table would present preliminary OFLs and ABCs by stock for SSC review and approval. This table would only cover natural stocks in the fishery that are not ESA listed or covered by an international exception. A second table, similar to the current Table I-3 in Pre-season Report I, would present a status determination table for the above stocks and stocks covered by an international exception. The SSC recommends that the annual Review of Ocean Salmon Fisheries report include a table that summarizes post-season performance of the previous year's management results relative to the OFL and MSST (minimum stock size threshold).
- Alternatives were presented for single-year and three-year status determination criteria (SDC). Current overfishing criteria are based on three-year stock performance. The MSST was proposed to be one half of S_{MSY} . This is consistent with the National Standard 1 Guidelines, but the SSC requested analysis supporting use of this criterion for salmon and a comparison of using one and three year time frames for determining overfishing: Tables 4-1 and 4-2 in the draft document now provide this information. The SSC recommends the SDC be based on 3-year geometric means as they will be less subject to random error (noise) in the estimation and evaluation process.
- The SSC was concerned that the Council adopt appropriate levels of F_{MSY} and requested documentation for the F_{MSY} proxy values used for Chinook and coho: Appendix C of the current draft provides this documentation for Chinook. The SSC notes that using mean F_{MSY} gives equal weight to each estimate of F_{MSY} . It might have been better to use a method that accounts for the variability (uncertainty) in the estimate of F_{MSY} from each

source. However, the STT reported that the data are not available for such an analysis. The SSC endorses the proposed value of 0.78 as an F_{MSY} proxy for Chinook. Appendix E documents the development of reference points for Washington coastal coho stocks. In the previous draft, it was proposed that a proxy be used for F_{MSY} for these stocks. In the current draft, F_{MSY} has been explicitly estimated for each stock. This should be preferable to the use of a proxy and the SSC endorses the stock-specific values of F_{MSY} proposed in Table E-4. The SSC Council may want to reconsider the Chinook F_{MSY} proxy in the future using more recent data and recommends that the F_{MSY} for Washington coastal coho be subject to a future Methodology Review that would evaluate stock-specific-values of F_{MSY} compared to a F_{MSY} proxy for the group.

- In its June statement, the SSC requested a discussion of the rationale for the choice of 5 percent and 10 percent buffers between F_{MSY} and F_{ABC} for Tier 1 and Tier 2 stocks, respectively: This is now documented in Appendix D. The SSC notes that the choice of the size of the buffer and the probability of over-fishing is ultimately a policy decision. The Council may want to consider alternatives to buffer sizes other than those proposed. Additional analyses would be needed to evaluate other buffer choices.
- No buffers to account for management uncertainty are proposed at this time. The SAC proposes to use an adaptive management approach. If ACLs are consistently exceeded, the use of buffers would be considered and implemented as needed. In June, the SAC reported that quotas have rarely been exceeded in recent quota-managed fisheries. The SSC requested a historical comparison of preseason quotas and postseason catches to support this statement: Appendix F of the current draft provides this information.

The SSC notes that it is difficult to evaluate the long-term consequences of any of the proposed alternatives without some comparison of possible outcomes under the different alternatives. Something similar to a management strategy evaluation modeling process could have provided these comparisons. However, given the time constraints for developing this amendment it was not possible.

There is a new *de minimis* fishing section in the current draft. The choice of *de minimis* fishing alternatives is largely a policy decision. The SSC notes that Alternative 4 would allow fishing at stock abundances below levels that have been seen previously.

The SSC notes the difficulty of comparing economic effects of the alternatives in a quantitative manner. However, a qualitative discussion that clearly describes the potential consequences of increasing/decreasing annual harvest opportunities relative to effects on overfished probabilities would be helpful. The only economic effect of overfished determinations noted in the current analysis is a reduction in ex-vessel prices due to lower ratings by seafood watch programs (p. 104). The SSC notes that other factors exert greater influence on west coast salmon prices – for instance, supply and prices of farmed salmon and Alaska wild salmon. A more relevant economic effect to consider in the context of overfished determinations is loss of harvest opportunity associated with more stringent management restrictions and potential expansion of such restrictions over a broader geographic area.