

SALMON METHODOLOGY REVIEWS

Situation: Each spring, the Council authorizes the Scientific and Statistical Committee (SSC), with assistance of the Salmon Technical Team (STT), to review estimation methodologies for the coming year. At the April Council meeting, the SSC identified a number of candidate models for review and stated that materials to be reviewed would need to be received by September 29, 2000 (a deadline based on the time-line and procedural requirements set out in Council Operating Procedure 15). The following is a list of the models identified and a summary of some of the Council discussion from the April meeting.

1. The Coho Cohort Analysis Project

Washington Department of Fish Wildlife stated the coho cohort analysis project is a high priority for completion, and the comprehensive coho project, a joint project being conducted with the tribes, is slated for completion in December 2000.

2. The New Klamath Ocean Harvest Model (KOHM)

California Department of Fish and Game and National Marine Fisheries Service (NMFS) staff are now working on the model; however, the new model can be expected to have many of the problems of the current model. The main improvement will be the incorporation of a more complete database. The model and documentation should be available for review by the September 29, 2000 deadline.

3. A Chinook Fishery Regulation Assessment Model (FRAM) Revised to Model Selective Chinook Fisheries

Selective fisheries for chinook are not anticipated for the ocean fisheries in the year 2001, but may be implemented in southern Puget Sound. STT members informed the SSC that inside and outside fisheries need to be assessed using a single chinook FRAM model. For this reason, the SSC believes it appropriate to schedule a review to assess the effects of changes to the model.

4. Review Preseason Chinook and Coho Abundance Forecast Methodologies

Formal documentation and presentation of these methodologies would likely require significant efforts by the agencies involved (Attachment B.3.a.). Because of the potentially large amount of work that could be involved, the state agencies were asked in a letter dated June 2, 2000 to identify those abundance forecast methodologies which they believe would most benefit from SSC review. Responses to this request are scheduled as part of this agenda item. The SSC would like to begin its review of abundance forecast methodologies in October 2001. Review of all the methodologies may take several years.

With respect to the chinook FRAM, the Council requested clarification on the SSC statement which noted some potential areas of bias in the chinook FRAM:

Three specific areas of possible bias related to the data used in the current chinook FRAM were brought to the attention of the SSC. These were:

- (1) Coded wire tags used to represent Lower Columbia River wild chinook stocks.*
- (2) Spring chinook stock composition in the non-treaty troll fishery.*
- (3) Encounter and shaker mortality rates in the treaty troll summer chinook fishery.*

The demonstration of the performance of the new chinook FRAM should address these issues, but should not be limited to these three items. It should be much broader and include a demonstration of the robustness of the model to changes in the data and other model parameters.

The SSC's response is provided as SSC Report B.3. While the SSC is scheduled to update the

proposed review schedule (Agenda Item B.3.d.), the SSC will not likely have any additional reports at this meeting, unless it has comments on abundance forecast methodologies identified by the states as most needing review.

Council Actions:

1. **Endorse or reject the goals of reviewing the models listed in Items 1, 2, and 3 above in the year 2000.**
2. **Determine (a) whether or not abundance forecasts will be included in the priority list (Item 4 above), and if so, (b) the forecasts to receive top priority, and (c) the target date(s) for completion of top priority forecast reviews.**
3. **Request responsible agencies to provide needed documents by the indicated deadline and to have individuals responsible for the models available for presentation of the materials at SSC review meetings.**
4. **Consider the SSC's response to the Council request for a clarification on potential bias in the chinook FRAM, and determine whether additional clarification or other Council actions are needed.**
5. **Other needed Council actions, as necessary.**

Reference Materials:

1. Draft Abundance Predictors Used to Support Pacific Fishery Management Council Management of the Ocean Salmon Fisheries (Attachment B.3.a.).
2. SSC Report B.3.

PFMC
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