

MODEL EVALUATION WORKGROUP
REPORT ON SALMON METHODOLOGY REVIEW TOPICS

At the April 2007 meeting, the Council developed a list of nine potential subjects for the salmon methodology review. During a conference call on September 4, the Model Evaluation Workgroup (MEW) discussed the five potential subjects that were identified as being MEW assignments. The MEW concluded work on four of the five subjects has been completed, or is near completion, and that these four items are ready for review by the Salmon Subcommittee of the Scientific and Statistical Committee (SSC) at its Salmon Methodology Review meeting in October. These four items consist of two Chinook Fishery Regulation Assessment Model (FRAM) and two Coho FRAM modeling tasks.

The Chinook FRAM tasks were to: (1) add stocks from south of Cape Falcon to the Chinook FRAM base period and (2) improve CWT representation of lower Columbia River (LCR) natural tule Chinook in the Chinook FRAM base period. These tasks are nearing completion. In the process of adding Sacramento/Central Valley Chinook stock representation to the FRAM model, the work team also added stocks representing Willapa Bay Chinook and Washington North Coastal Chinook. During the process of expanding CWT representation of LCR naturals in the model, the work team also used more recent and complete CWT information to separate Hoko fall Chinook from the Juan de Fuca FRAM stock aggregate. In summary, LCR naturals are being represented by an expanded set of CWT data, while three additional Chinook populations were added as FRAM stocks, and updated data were used to represent Hoko as an independent stock.

MEW recommends the SSC review these modifications to Chinook stocks in the FRAM model base period in anticipation of using the revised base period for 2008 pre-season modeling.

The Coho FRAM tasks were to: (1) evaluate revisions to the FRAM base period as produced by a work group of the Pacific Salmon Commission (PSC) Coho Technical Committee and (2) report on CWT representation for lower Columbia River natural coho for FRAM modeling. As for Chinook, these coho tasks are closely integrated. A base year set of FRAM compatible coho run reconstructions (1986-1997) is presently being reviewed by all concerned management entities. Thus, revisions to the base period data are still possible including data for those years (1986-91) currently used in FRAM for Council fishery assessment. However, it is anticipated these revisions will be minor and a new Coho FRAM base period data set will be available for use in 2008 by the PSC and Council.

Uncertainty remains regarding how to best represent lower Columbia River natural coho in FRAM. Lacking an understanding of what constitutes LCR natural coho is why, at present, the exploitation rate on unmarked Columbia River hatchery coho is used to assess compliance with Endangered Species Act (ESA) standards. Work on two linked tasks is needed for incorporation in the FRAM base period data and subsequent usage of FRAM for pre-season fishery assessment.

These tasks include: 1) selection of surrogate CWT groups from lower Columbia hatcheries that best represent the geographic and temporal profile of the natural stock and 2) development of pre-season forecast methodology that is consistent with the lower Columbia natural stock designations used in FRAM. Some progress has been made on these tasks during discussions with Columbia River technical staff and further meetings are scheduled for the fall and winter. MEW is hopeful that enough progress could be made for possible incorporation into the FRAM for 2008.

MEW recommends SSC review of the methodologies used to develop the Coho FRAM base years and the potential configurations proposed to obtain the updated coho base period. A discussion regarding the issues surrounding CWT representation of lower Columbia natural coho in FRAM is also warranted.

PFMC
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