

**Update Coho FRAM Base Period for Mark-Selective Fishing Years (1998-2009), Year 2: Phase II
(NWIFC Component)**

Final Report

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Summary

The NWIFC component of Year 2, Phase II of this project has been a continuation of the data collection and validation that began in Phase I. This work is part of a broader effort to develop coho terminal run reconstruction (RRTERM) inputs for an expanded coho base period (1998-2009). The NWIFC component involved additional inter-agency consultation with regional tribal biologists with specific knowledge about the salmon management in each of the terminal areas. Tribal fishery catch data was collected and collated from all available data sources, with the goal of splitting these data into marked and unmarked components. Often, this data did not exist or was incomplete and therefore required various alternative methods of estimation.

Methods

The Regional Mark Processing Center's Regional Mark Information System (RMIS) database was queried to produce catch data summarized by fishery and time-step. This RMIS fishery catch data was found to lack complete estimates of catch by mark status or sample size for many strata. In particular, Washington coastal tribal fisheries, some of which operate their own CWT-reading labs and submit CWT-recovery data to RMIS independently from WDFW, were frequently found have fishery catch data gaps in the RMIS database. Continuing effort was undertaken to obtain raw fishery-sampling data from various tribal fisheries management agencies. The data kept by these agencies typically did not align with the fisheries definitions and time-steps compatible with RRTERM and therefore required extensive re-configuration. In some cases, fishery catch data by mark status did exist in RMIS but did not match fishery catch data from NWIFC's own Treaty Fish-Ticket database, suggesting that the RMIS data was incomplete. Each data deficiency was unique and therefore required individual attention to evaluate the cause and to find a customized approach for resolving the problem. Some requests for fishery sampling data from tribal managers could not be fulfilled within the project's time schedule, which may necessitate the development of alternative methods for estimating the marked and unmarked catch proportions for certain fisheries.

Results

Terminal run reconstruction for coho (RRTERM) defines 205 separate coho fisheries, 58 of which are Treaty fisheries occurring in Washington state. For each fishery, catches were divided into five time steps: January through June, July, August, September, and October through December, although not every fishery was conducted in every year or time step. Expanded catch estimates by mark status were sought for each fishery and time step for the years 1998-2008. The RMIS database query provided data that was, at times, incomplete or inconsistent with other records of treaty fishery catch, specifically the Treaty Fish-Ticket database maintained by the Northwest Indian Fisheries Commission. A considerable effort went into exploring these inconsistencies by comparing the RMIS query results with other sources of fishery catch data. A frequent problem was that the RMIS data often failed to distinguish mark status,

instead aggregating marked and unmarked. Another common data gap occurred where the total number of fish sampled in a fishery or time-step was missing from the RMIS query data.

Some gaps in the catch data by mark status have so far proven intractable. In those cases, alternative methods for estimating the marked/unmarked proportions of the catch may need to be developed. These methods might include applying the mark status proportions, by time-step, that were observed from sampling non-treaty fisheries to the corresponding Treaty fisheries in the same catch areas.

The volume of the data involved in this project is larger than can be easily presented within this report. The attached Excel spreadsheet [MSMVS_Catch_Summary-BP 7-26-13.xlsx] contains both the original marked/unmarked catch data that were retrieved from PSMFC Regional Mark Information System (RMIS) database query as well the data "repaired" (to the extent that data gaps could be remedied) using raw catch-sampling records provided by tribal fisheries managers data during Phase II. The suitability of this fishery catch data for developing coho terminal run reconstruction (RRTERM) inputs for the expanded base period (1998-2009) will be evaluated through the other components of this project.