

SALMON TECHNICAL TEAM REPORT ON THE LOWER COLUMBIA COHO HARVEST MATRIX

The Salmon Technical Team (STT) has reviewed the reports from the Lower Columbia River Natural Coho Workgroup on the Lower Columbia River coho harvest matrix (Agenda Item F4.b, Report 1 and Report 2). We compared the range of exploitation rates in the alternatives against the range of exploitation rate ceilings that have been in place since 2005 as shown in the annual Preseason Report III (Council Adopted Management Measures and Environmental Assessment Part III). This retrospective comparison of preseason exploitation rates from FRAM (Fishery Regulation Assessment Model) with the range of exploitation rates in the alternatives was not a detailed quantitative analysis. We identified some key qualitative points to consider regarding the effect on Council-area and inside waters fisheries that have been limited by constraints on Lower Columbia natural coho and other stocks. The following is a summary of the key management issues and list of constraining stocks during 2005-2014.

- The Endangered Species Act (ESA) guidance limit on Lower Columbia natural coho for combined ocean and mainstem Columbia River fisheries ranged from a low of an 8 percent exploitation rate in 2008 to a high of 22.5 percent in 2014 and averaged 16 percent under the current matrix.
- In all years, Lower Columbia natural coho were a key constraining stock in Council fisheries when ocean impacts were combined with in-river impacts, where the latter can account for up to a third of the total impacts.
- Upper Fraser-Thompson stock coho was the other constraining stock caught in Council fisheries north of Cape Falcon. In some years, some Puget Sound stocks and Oregon coastal natural coho were near their conservation objective limits but were never the constraining stock.
- In 2008, the critical low status of Lower Columbia natural coho and the corresponding 8 percent ESA guidance limit significantly constrained all Council area coho fisheries as well as fisheries in the Columbia River. Catch quotas for coho were greatly reduced and mark-selective regulations were required in all nontreaty fisheries. A portion of the allowable impacts on coho are required to cover release mortality in Chinook-only fisheries.

After reviewing the range of alternatives shown in these reports in a retrospective overview of the management objectives and status of all stocks during these years, the STT has the following comments:

- An exploitation rate ceiling of 10 percent on Lower Columbia River natural coho should cover the fishing mortality impacts in Chinook-only fisheries as well as some very limited level of harvest in fisheries allowing retention of coho.
- The ability of ocean fisheries to respond to an increase in the allowable exploitation rate of Lower Columbia River natural coho may be limited as other stocks become the most constraining.

- As the allowable exploitation rate for Lower Columbia River natural coho approaches the upper limit shown in the matrices, there is a higher likelihood that the river fisheries will receive the greater increment in the proportion of total impacts.
- Since most conservation objectives are based on all-fishery impact limits, an increase in ocean fishery impacts may further constrain fisheries in inside waters in order to meet the objectives. Upper Fraser-Thompson coho stock is one example of a key constraining stock that would require further restrictions to fisheries in Puget Sound if ocean fisheries were expanded.
- In any given year, the most constraining stock(s) may differ and the allowable impacts in Council fisheries in combination with impacts in inside fisheries must meet the conservation objectives for all stocks in the Fishery Management Plan.
- The Lower Columbia River natural coho harvest matrix only affects the conservation objectives for this stock; the conservation objectives for other stocks remain unchanged.

PFMC
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