

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
KLAMATH RIVER FALL CHINOOK WORKGROUP REPORT AND
2024 MANAGEMENT OPTIONS – FINAL GUIDANCE

The Scientific and Statistical Committee (SSC) reviewed the document “Report to the Pacific Fishery Management Council on Klamath River Fall Chinook Interim Management Measures for Ocean Salmon Fisheries in 2024 and Potentially Beyond” from the Klamath River Workgroup (KRWG) (Agenda Item C.4.a, Supplemental KRWG Report 2). The four lower dams on the upper Klamath River are being removed this year and Klamath River Fall Chinook (KRFC) will be able to access over 400 miles of habitat that were previously blocked. The report compares the KRFC stock-recruitment curve estimated from data from Brood Years 1979 to 2000 (old time period) with that estimated from data from Brood Years 2001 to 2017 (new time period), while noting updates to the data for some years in the old time period. The report also proposes a number of alternative Harvest Control Rules (HCRs) and lists data and monitoring needs. The SSC commends the KRWG on its work.

The definition of spawners and recruits in Supplemental KRWG Report 2 should be clarified with respect to natural and hatchery fish. KRFC spawner escapement targets are in terms of natural area spawners, which includes some hatchery-origin fish that stray. The presence of hatchery-origin fish complicates interpretation of spawner-recruit relationships, and future reports should be clear on how they consider hatchery-origin fish when estimating recruitment, and explain why they were treated that way.

The report proposes several alternative harvest control rules. The uncertainty around forecasts affects the ability to meet target spawner abundance levels by choosing a target Exploitation Rate (ER). In cases where forecast error is large, the risk of not meeting spawner abundance targets (or setting an overly conservative exploitation rate) is greater for HCRs that have large, discrete increases in target exploitation rate as potential spawner abundance increases (see for example, Alternatives 3.a., 3.b., and 4).

Alternatives that include a buffer that reduces the ER at high levels of abundance (alternatives 2a., 2b., and 4) have the benefit of (potentially) increasing the utilization of new habitat upstream of the dams.

Estimating spawner-recruit relationships following dam removal in the Klamath River will require 10-15 years of additional data. However, in the interim, the KRWG should explore alternative methods of estimating capacity in the newly available habitat upstream of the dams. Interim methods that do not require more than a decade of new data could then be used to develop escapement targets for the near- or medium-term. Further, maintaining the current level of data collection is required to update spawner-recruit relationships after colonization of the newly accessible habitat.

Similar work that estimates spawner-recruit relationships and evaluates productivity and capacity with contemporary data, as was done by the KRWG, is needed for other salmon stocks on the Pacific coast.

PFMC
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