NATIONAL MARINE FISHERIES SERVICE REPORT ON SACRAMENTO RIVER FALL CHINOOK AND KLAMATH RIVER FALL CHINOOK CONSERVATION OBJECTIVES

At the April 2023 Council meeting, the Council acknowledged the importance of re-evaluating the conservation goals and the management frameworks for both the Sacramento River and Klamath River fall Chinook stocks (SRFC, KRFC). This work has been identified as a high priority by the Scientific and Statistical Committee and the Salmon Technical Team, and supported by the Salmon Advisory Subpanel, the Council and other management entities. NMFS fully supports this work but is mindful of the highly dynamic nature of these systems, particularly for KRFC following dam removal, the Council workload, emerging salmon issues, the shared challenge of limited capacity in agency staffing, and budget constraints. The question is not whether to do the work but the most efficient way to make progress for both stocks as soon as possible given their importance to the fishery and the significant public interest in ocean and inland areas.

Sacramento River fall Chinook have experienced a pattern of low escapements, higher than anticipated exploitation rates and continued poor in-river environmental conditions. The stock has not met its escapement objective in 6 of the last 8 years with escapement in some years among the lowest observed. In fall 2022, the basis of the current conservation objective established in the 1980s was reviewed as one of the Methodology Review topics and reviewers had difficulty reproducing it using historical documents and available data. The California Fish and Game Commission letter to the Council in April expressed concern that "the current conservation objectives do not adequately reflect today's ocean conditions, the Sacramento-San Joaquin Delta system, nor the state of readily available habitat". The review, stock status, management performance and dynamic role of the environment underscore the need to assess in more depth the conservation objective as well as management models and tools.

The anticipated benefits to the Klamath River ecosystems from removal of the four Klamath dams are substantial and are to be celebrated. It is an historic achievement and the culmination of decades of hard work and negotiation. Changes to the river and the species inhabiting it will be substantial, particularly for Klamath River salmon. The California Department of Fish and Wildlife estimates it may be 8-10 years before sufficient information is available to develop new conservation objectives (Agenda Item E.5.a, Supplemental CDFW Report 1, April 2023), and interim objectives will be needed as the river and Council fisheries adapt to the large scale changes anticipated following dam removal.

Given recent escapements, the low 2023 forecast, and a review indicating poor ecosystem conditions for broods returning in 2024 and 2025, abundance of KRFC returning in 2024 and 2025 is likely to be low and unlikely to test the capacity of the newly available habitat. The river may respond very differently than we think and it makes sense to proceed cautiously while collecting data to inform changes in management measures and harvest objectives. Almost 10 years after the Elwha dams were removed opening 70+ miles of habitat, the 5-year escapement average has only increased from 71 (2010-2014) to 134 (2015-2019) spawners although the conformation and restoration of the river and estuary has changed drastically. Although it might be possible to use the available modelling and projections in the various restoration and reintroduction plans described in April (Simondet presentation) we have no empirical data or analysis to inform what the right numbers should be at this time given the changes

anticipated throughout the system. Monitoring the distribution and use of the river by salmon over the next several years and estimates of juvenile survival would provide empirical data to inform interim management measures.

Process requirements are also a consideration to maximize use of available staff. The requirements of the FMP and MSA typically require FMP amendments where substantive changes to control rules or FMP provisions are adopted by the Council. KRFC have been the object of multiple FMP amendments[1] reflecting changes in escapement goals or harvest control rules (HCRs). Interim goals developed outside the provisions of the current FMP could change substantially from year to year as data become available, potentially requiring back to back amendments adding substantially to Council and staff workload.

In this context, the provisions for KRFC in the Pacific Coast Salmon Fishery Management Plan (FMP) and the associated KRFC HCR are a logical starting point by providing the necessary flexibility to adaptively manage the stock until new data are available to inform changes to the existing objectives and harvest framework. The HCR provides the Council with the latitude to adopt lower exploitation rates (and conversely to target higher escapements) than the maximum rates allowed by the HCR framework, "*The control rule describes maximum allowable exploitation rates at any given level of abundance. The Council may recommend lower exploitation rates as needed to address uncertainties or other year specific circumstances.*" Removal of the Klamath dams and the resulting uncertainty in annual abundances would certainly seem to apply here. As an interim measure, the Council could use this provision for KRFC to implement more conservative management over the several years as suggested in the April CDFW report and the Council's scoping report until more is known about how the river is responding.

NMFS supports the Council's plan to adaptively manage KRFC but by sequencing the work appropriately, significant progress can be made on the reviews for both KRFC and SRFC. We suggest that the initial focus of a KRFC effort should be to assess the level of monitoring and sampling needed to maintain the integrity of existing data for fishery management, the implications of changes in tagging and sampling and the potential loss of data points (if any), and development of technical tools that could be used to subsequently inform an adaptive management framework. The current FMP provisions for KRFC could govern fishery management during the initial phase. The Council's scoping report envisions this effort to take longer and be on-going. During this period, the SRFC effort could complete its work to develop recommended options for a new SRFC objective and any changes to the SRFC HCR. Initial work to inform the SRFC objective has already occurred both through the Council process and in the scientific literature. Previous SSC statements and the scoping report envision the work could occur over a shorter time.

These suggestions are intended to acknowledge the importance of the work to be done and the challenges we have in addressing important work on multiple fronts by making the most efficient use of the tools and resources that we have.

[1] Amendments 9, 15 and 16. Changes or additions to conservation objectives may be made either through a plan amendment or notice and comment rulemaking if a comprehensive technical review of the best scientific information available provides evidence that, in the view of the STT, SSC, and the Council, justifies a modification.