

SALMON TECHNICAL TEAM REPORT ON  
SALMON METHODOLOGY REVIEW – FINAL TOPIC SELECTION

During the April 2024 Pacific Fishery Management Council (Council) meeting, no topics were identified as potential items for Methodology Review. Since that time, the Sacramento River Fall Chinook Ad-hoc Workgroup (SRWG) has been continuing to investigate methodologies to improve Sacramento River Fall Chinook (SRFC) stock assessment and management. The SRWG identified three potential topics for Methodology Review in 2024 that would help advance the objectives outlined in their [Terms of Reference \(TOR\)](#). Dr. Will Satterthwaite presented these topics to the Salmon Technical Team (STT), which included:

1. Derivation of proxy  $S_{MSY}/S_{MSP}$  ratio and  $F_{MSY}$  value suitable for use for SRFC.
2. SRFC cohort reconstruction and comparison to the Sacramento Index (SI).
3. Uncertainty metrics and buffering approaches for SRFC forecasts.

Topic 1: The STT expressed support in the [June 2024 Supplemental STT Report](#) for identifying a reasonable ratio between  $S_{MSY}$  and  $S_{MSP}$  to inform data-based estimates of  $S_{MSY}$  for SRFC. The Scientific and Statistical Committee recommended updating the  $F_{MSY}$  proxy using data from representative stocks at the [June PFMC meeting](#). The STT supports selecting topic 1 for Methodology Review this fall.

Topic 2: The STT expressed support for developing a cohort reconstruction for SRFC in the [June 2024 Supplemental STT Report](#) and the STT is also supportive of moving item 2 forward for Methodology Review. There was discussion amongst the team as to whether the cohort reconstruction requires a Methodology Review, given that cohort reconstruction methods have been reviewed several times in the past for other stocks. However, the STT believes the documentation and open discussion that occur during the Methodology Review process would be worthwhile considering the importance of this stock to South of Falcon ocean fisheries and management.

Topic 3: Expressing uncertainty for the abundance forecast and application of bias correction and buffers has been proposed for SRFC. The STT notes that many changes to SRFC assessment and management are currently being discussed, including: updating reference points, implementing a cohort reconstruction, incorporating environmental covariates in forecast models, and development of buffers to the harvest control rule. Developing buffers to abundance forecasts should be considered alongside these other proposals. The assessment and management landscape for SRFC may be more clearly defined in the coming year and these potential changes for SRFC could be reviewed at a later Methodology Review. Additionally, the Council has shown interest in the development of risk tables or other tools to incorporate in salmon management that have not been fully developed, and those may also play a role in SRFC management. For this reason, and for prioritizing workload considerations, the STT recommends foregoing Methodology Review on Topic 3 in 2024, but keeping it on the list as a potential topic for the 2025 Methodology Review.