

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON
SACRAMENTO RIVER FALL CHINOOK WORKGROUP PROGRESS REPORT AND
RECOMMENDATIONS

Will Satterthwaite (National Marine Fisheries Service, Southwest Fisheries Science Center) provided an update on the progress of the Sacramento River Fall Chinook Workgroup (SRWG) and discussed future avenues of work. The SRWG has made substantial progress on six aspects of Sacramento River Fall Chinook (SRFC) management, including developing new S_{MSY} and F_{MSY} reference points, conservation objectives, and control rules. The Scientific and Statistical Committee (SSC) is supportive of the SRWG's work and recognizes the complexity involved in this work.

The SSC reviewed the F_{MSY} proxy and the cohort reconstruction for SRFC during the October 2024 Salmon Methodology review. Discussion of these topics is summarized in Agenda Item F.2.a, Supplemental SSC Report 1.

The fundamental challenge for the SRFC is that the stock is a composite of natural- and hatchery-origin fish. Current management reference points are defined in terms of this composite. Unfortunately, concepts such as S_{MSY} and F_{MSY} are not applicable to a composite stock because production may be largely or entirely decoupled from spawning abundance. There is no theoretically sound way to define abundance and harvest rate reference quantities for a composite stock that are roughly equivalent to S_{MSY} and F_{MSY} . Developing appropriate new methods would require substantial effort.

S_{MSY} and F_{MSY} do have a sound theoretical basis for the natural-origin component of the stocks, and the SSC supports the SRWG's efforts to estimate these quantities (or appropriate proxies, see Agenda Item F.2.a Supplemental SSC Report 1). Available data for SRFC limit the ability to identify spawners of natural-origin and therefore the SSC supports the SRWG proposals to measure S_{MSY} in terms of natural-area spawners. However, the current control rules and harvest planning models are based around total (natural plus hatchery) escapement for SRFC, so moving to natural area spawners would require altering several preseason planning tools.