

## SACRAMENTO RIVER FALL CHINOOK SPAWNER ABUNDANCE AT MAXIMUM SUSTAINABLE YIELD ( $S_{MSY}$ ): PEER REVIEW RESULTS AND NEXT STEPS

Under this agenda item, the Pacific Fishery Management Council (Council) will receive the final report and recommendations of the Sacramento River fall Chinook (SRFC)  $S_{MSY}$  Peer Review Panel (Panel). The Panel's charge, as described in their [Terms of Reference](#) (TOR), was to evaluate the ad-hoc Sacramento River Fall Chinook Workgroup (SRWG's) proposed method and candidate datasets for determining an updated SRFC  $S_{MSY}$  value. Specifically, they were asked to evaluate the use of the Ricker stock-recruitment relationship for SRFC, the ratio method ( $S_{MSY} = F_{MSY} \times S_{MP}$ ) for estimating  $S_{MSY}$ , four candidate recruitment datasets, potential alternative approaches, and the appropriate range of years for analysis. If the Panel concluded the use of a Ricker stock-recruitment relationship, ratio method, or proposed datasets were not scientifically suitable, the TOR allowed for the Panel to make recommendations on alternative approaches and future work.

The Panel met in August 2026 in Sacramento, California, and held subsequent September and October meetings online, via webinar.

As described in the Panel's final report included under this agenda item, the Panel concluded:

- The Ricker relationship is appropriate for estimating the natural-area spawner abundance, but it is not uniquely supported over other plausible stock-recruitment models.
- The ratio method is mathematically valid under a compatible Ricker formulation, but its reliability depends on both inputs ( $F_{MSY}$  and  $S_{MP}$ ) and their applicability to SRFC.
- The *status quo* approach lacks a demonstrable scientific basis and is not reproducible.
- The Panel does not recommend any of the four candidate datasets for adoption at this time. All four candidate datasets provide scientifically useful information, but each has substantial limitations and potential biases.
- The cohort-reconstruction is the Panel's recommended long-term approach, but the current time series is too short and environmentally confounded to be used at this time.
- In general, the longest scientifically defensible time series available for a given dataset should be used, and time series should not be truncated to emphasize recent conditions or restrict an integrated analysis to the shortest common period.
- A focused evaluation of interim approaches should occur while the cohort-reconstruction data series gains coverage and contrast.

### **Background and prior work:**

In June 2023, the Council formed the SRWG, which was tasked with exploring potential updates to the SRFC reference points ( $F_{MSY}$ ,  $S_{MSY}$ , and minimum stock size threshold), conservation objective, and harvest control rule. In 2024, the SRWG proposed a method for updating the  $F_{MSY}$  value. This method was reviewed by the Scientific and Statistical Committee Salmon Subcommittee and Salmon Technical Team at a methodology review meeting, and the Council adopted the new proxy for use in management at their November 2024 meeting.

In April 2025, the SRWG proposed a method for deriving an  $S_{MSY}$  value for the 2025 salmon methodology review. Given the importance of  $S_{MSY}$  to subsequent management decisions, as well

as the ecological and economic importance of SRFC and the complexity of the Sacramento River basin, the Council determined at their September 2025 meeting that the SRWG's work to update the  $S_{MSY}$  value warranted review beyond the standard methodology review process. The Council therefore requested a publicly accessible independent peer review by a panel of experts be held.

More information on the Council's prior work related to SRFC management, including links to previous SRWG reports, can be found on the Council's SRFC [webpage](#).

**Purpose of this agenda item:**

Updating the  $S_{MSY}$  value is part of a broader Council effort to evaluate and update the SRFC management framework (the reference points, conservation objective, and harvest control rule). To date, the Council has anticipated first identifying a revised  $S_{MSY}$  value that would then inform subsequent discussions and evaluations of alternative conservation objectives and harvest control rules and then implementing the full revised management framework in one fishery management plan (FMP) amendment.

The Council is currently scheduled to receive a scoping report on the SRFC management framework FMP amendment in September 2027. In light of the Panel's recommendation that none of the evaluated datasets are sufficient to update the  $S_{MSY}$  value at this time, the Council could consider requesting the scoping document be focused on alternative harvest strategies that could be implemented by the Council until data sufficiency reviews indicate that a cohort-reconstruction-derived  $S_{MSY}$  value can be identified.

**Council Tasks:**

- 1. Review and discuss the Peer Review Panel Report.**
- 2. Consider the Panel recommendations that none of the four candidate datasets should be used to estimate the SRFC  $S_{MSY}$  value at this time, the cohort-reconstruction is the preferred long-term approach, and interim approaches should be evaluated while the cohort-reconstruction data series gains coverage and contrast. Affirm these recommendations, as appropriate.**
- 3. Provide direction to staff regarding a September 2027 scoping report. Consider whether that report should focus on interim approaches, as recommended by the Panel.**

**Reference Materials:**

1. Agenda Item F.3.a, Peer Review Panel Report 1: Sacramento River Fall Chinook  $S_{MSY}$  Peer Review Panel Report.
2. If received, Public Comments are electronic only (see [e-portal](#)).

**Agenda Order:**

- F.3 Sacramento River Fall Chinook Spawner Abundance at Maximum Sustainable Yield ( $S_{MSY}$ ): Peer Review Results and Next Steps
- a. Report of the Peer Review Panel
  - b. Reports and Comments of Management Entities and Advisory Bodies
  - c. Public Comment

Angela Forristall  
Scott Rumsey

d. Council Discussion and Direction on Next Steps

PFMC  
10/21/26