Agenda Item J.1.a
Supplemental CPSMT Report 1
September 2026

COASTAL PELAGIC SPECIES MANAGEMENT TEAM REPORT ON FISHERY MANAGEMENT PLAN AMENDMENT: MANAGEMENT PROVISIONS FOR THE REVISED SARDINE STOCK

The Coastal Pelagic Species Management Team (CPSMT) discussed Agenda Item J.1 Attachment 1- Review of Management Provisions for Pacific Sardine, Attachment 2 - Joint Meeting to Review Management Provisions for Pacific Sardine, and Attachment 3 - Proposed Amendment to Coastal Pelagic Species Fishery Management Plan to Revise the Pacific Sardine Definition.

Recommendations: The CPSMT recommends adoption of the following Range of Alternatives (ROA) listed under Actions 2–3 of this amendment:

- *Under Action 2 to specify the coastwide U.S. Pacific sardine stock status determination criteria and acceptable biological catch (ABC), the CPSMT recommends that the ROA include No Action and Alternative 1, supporting the recommendation of the Scientific and Statistical Committee (SSC) to modify Alternative 1 (Agenda Item J.1.a Supplemental SSC Report 1).*
- *Under Action 3 to specify the coastwide U.S. Pacific sardine stock harvest control rules, the CPSMT recommends the ROA include No Action and Alternative 1 (described in Agenda Item J.1 Attachment 3) for management of the revised stock.*

The CPSMT reiterates its recommendation from the July 2026 Joint Meeting (Agenda Item J.1 Attachment 2; summarized in Table 1 below) that the more intensive management approach (i.e., "General" or "Harvest Guideline" (HG) control rule in the CPS Fishery Management Plan [FMP]) continue to be used for the U.S. Pacific sardine stock (coastwide). This approach uses annual estimates of biomass and reduced exploitation rates as biomass declines, and is appropriate for the U.S Pacific sardine stock to best meet the goals and objectives within the CPS FMP. In addition, the CPSMT supports using the existing annual management harvest specifications process for Pacific sardine and recommend P*, Annual Catch Limit (ACL), Annual Catch Target (ACT) and accountability measures based on data available for the specifications cycle.

Table 1. Summary of recommendations from the July 2026 Joint Meeting (Table 3 under Action 3 of J.1 Attachment 3)

FMP Element	**Specification**
Management Strategy	More intensive
ACL	Less than or equal to the ABC
HG	H = (BIOMASS – CUTOFF) * FRACTION * DISTRIBUTION (not to exceed MAXCAT or ACL)
CUTOFF	150,000 mt
FRACTION	Equal to E_{MSY}
DISTRIBUTION	1
MAXCAT	200,000 mt

Harvest Control Rule Parameters

DISTRIBUTION
Because the revised stock definition includes all Pacific sardine in U.S. waters, the CPSMT recommends DISTRIBUTION be set to one (1) in the HG control rule.

FRACTION
The CPSMT recommends that FRACTION in the HG be set equal to E_{MSY}. This allows FRACTION to change over time with E_{MSY} as new scientific information becomes available. Bounds on E_{MSY} could be applied, as deemed appropriate by the SSC. Language in the CPS FMP on FRACTION could be modified to state "FRACTION = E_{MSY}" and remove descriptions of a temperature-based E_{MSY}, which is reported in the annual Stock Assessment and Fishery Evaluation (SAFE) report.

CUTOFF
The CPSMT recommends keeping CUTOFF in the HG calculation and to apply the current value used at 150,000 mt. Pacific sardine has historically experienced large fluctuations in abundance on decadal scales, even in the absence of fishing. Although it is not a requirement of the Magnuson-Stevens Act or National Standards, the CPSMT supports the use of CUTOFF as a precautionary value to protect this stock from exploitation pressures during times of low abundance.

For the northern subpopulation (NSP), CUTOFF was defined as 150,000 mt. This value was selected from a fisheries simulation analysis of 50,000 mt, 100,000 mt, and 150,000 mt in Amendment 8 (PFMC, 1998) using coastwide data. Analysts specifically recommended 100,000 mt or 150,000 mt to safeguard a seed stock and significantly reduce exploitation before reaching the minimum stock size threshold. In 2014, Hurtado-Ferro & Punt conducted a management strategy evaluation of different CUTOFF values (0 mt, 50,000 mt, 150,000 mt, and 314,400 mt, which represented 20 percent of the mean SSB_0) using the 2012 stock assessment, prior to the application of a habitat model to exclude the portion of the stock deemed "southern subpopulation." The evaluation found that retaining the 150,000 mt cutoff effectively mitigated severe stock collapse risks during low-productivity cycles while avoiding the extreme commercial fishery disruptions that higher cutoffs (such as 314,400 mt) would trigger. The CPSMT views a 150,000 mt CUTOFF as the most reasonable option for management of a U.S. Pacific sardine stock, given the performance of this value in simulations for the NSP in Amendment 8 (PFMC, 1998) and in Hurtado-Ferro & Punt (2014).

MAXCAT
The CPSMT recommends applying the same maximum catch (MAXCAT) value used for the NSP at 200,000 mt per fishing year. MAXCAT at 200,000 mt was previously analyzed and found to stabilize the fishery and allow high levels of harvest over time when the population is large. Higher levels of MAXCAT were found to result in higher chances of pulse fisheries. Since Amendment 8 of the CPS FMP was adopted (PFMC, 1998), the Pacific sardine HG has not exceeded 186,791 mt (2000) and U.S. landings have not exceeded 127,695 mt (2007).

Timing Considerations

Action now to adopt the ROA for the CPS FMP amendment would allow NMFS and Council staff to prioritize management of the U.S. Pacific sardine stock, including stock assessment and regulatory efforts. The CPSMT continues to support the interim Final Preferred Alternative (iFPA) of Action 1 of the proposed amendment that the Pacific sardine fishery management unit of the CPS FMP be defined as a single coastwide stock in U.S. waters (November 2025 Agenda Item J.3.a Supplemental CPSMT Report 1), and has not and does not recommend analysis of managing two distinct stocks. The new and best available scientific literature on Pacific sardine, including a review of all preceding research on Pacific sardine population biology (Craig et al. 2025; Erisman et al. 2025) and subsequent genetic research (Longo et al. 2025), reveals a lack of scientific evidence to support multiple discrete subpopulations. National Standard 2 (NS2; 50 CFR 600.315(a)) states conservation and management measures shall be based upon the best scientific information available (BSIA).

The CPSMT recognizes the concern that defining a new stock will nullify the "NSP" Pacific sardine rebuilding plan. However, the "NSP" rebuilding plan is not applicable to management of a coastwide U.S Pacific sardine stock, for which we do not yet have a status determination. If the coastwide stock assessment shows that the age 1+ biomass is below the minimum stock size threshold, and NMFS makes a determination that the stock is overfished, a rebuilding plan would be developed based on BSIA. Delaying the CPS FMP amendment will delay a status determination of the coastwide stock.

Harvest specifications for Pacific sardine is on the agenda for the April 2027 Council meeting. At that time, the SSC will apply a buffer that accounts for scientific uncertainty in the estimate of the overfishing limit (OFL) to calculate ABC. Following their recommendation, the CPSMT will recommend an ABC, ACL, HG and, if necessary, ACT based on the harvest control rule framework that is set for Final Action at the November 2026 Council meeting. Specifying an ACL with a number in the FMP would undermine the harvest specifications process. The CPSMT will continue to use discretion when recommending catch limits and management measures for the minimal harvest allowed while the age 1+ biomass is below CUTOFF.

Delaying this action would continue management of "NSP" that ignores BSIA and thereby fails to comply with NS2.

Management Considerations

When the biomass is above CUTOFF and the directed fishery is open, a seasonal percent allocation of the HG, described in Section 5.5 of the CPS FMP and codified at 50 CFR 660.511(f-h), is designed to address regional management considerations. The HG is allocated as follows: 40 percent on July 1st, 25 percent on September 15th, and 35 percent on January 1st.

There is no evidence to support any regional differences in demographics or other life history traits (e.g., growth) as reviewed in both historical (e.g., Clark and Marr 1955) and recent reviews (Craig et al. 2025, Erisman et al. 2025) of population biology. Individuals vary in the timing and location of birth, feeding rates, growth rates, spawning rates, migration patterns, condition, and longevity as a result of their life history responding to changes in local to broad environmental conditions.

In Pacific sardine, claims that regional catch limits are necessary to prevent localized depletion are

deeply rooted in the two-population framework that is not based on BSIA and an over-emphasized need to preserve genetic diversity. Recent genome-scale analyses demonstrate that Pacific sardine, even at the current low biomass levels, possess extremely high genetic diversity indicating that deleterious effects of a population bottleneck are unlikely (Longo et al. 2025). Adaptation operates across generations, and whole-genome data show no indication of geographically-partitioned differences over generational timescales (Longo et al. 2025). Suggestions that regional over-harvesting could permanently eliminate productive sub-components of the coast-wide sardine population misinterpret dynamic, environment-driven movement as fixed biological productivity (Craig et al. 2025; Erisman et al. 2025; Longo et al. 2025).

References

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