AD HOC FISHERIES INNOVATION WORKGROUP REPORT ON HIGHLY MIGRATORY SPECIES ROADMAP - EXEMPTED FISHING PERMIT BENCHMARKS AND EVALUATION FRAMEWORK

The Pacific Fishery Management Council's (Council) Ad Hoc Fisheries Innovation Workgroup (FIW) convened several times in 2026, most recently in person on October 22 and 23, 2026. A quorum of FIW members, Council staff (with contractor support), and a small number of other attendees participated. The FIW continued work under its charge to develop and refine Council procedures to facilitate the more rapid creation of new highly migratory species (HMS) fishing gears, consistent with the goals of the HMS Roadmap. This report provides a summary of the FIW's final recommendations and updates since the FIW's last presentation to the Council at the March 2026 meeting.

The FIW recommends that the Council take the following actions:

- Exempted Fishing Permit (EFP) Evaluation Framework: Adopt the EFP Evaluation Framework (framework), including EFP performance metrics and benchmarks and the EFP evaluation process; and direct Council staff to work with National Marine Fisheries Service (NMFS) and the HMS Management Team (HMSMT) to implement the framework.
- Updates to the HMS Roadmap: Incorporate the framework into the Roadmap. Task the HMSMT with reviewing the HMS Roadmap and adding updates and/or annotations reflecting progress completed through the FIW process.
- HMS EFP guidance and materials: Adopt the FIW's recommendations for EFP-related guidance and materials and direct Council staff to support NMFS in developing materials, update relevant Council resources as needed, and direct the HMS Advisory Subpanel (HMSAS) and HMSMT to reserve time at their meetings for potential applicants to informally discuss EFP ideas when there is interest.
- Relevant innovative tools and measures: Direct Council staff to develop web page(s) with key resources for HMS fishery participants interested in EFP opportunities, as well as resources and information about gear innovation, grants and funding sources to support innovation, cooperative research opportunities, and other programs. Encourage the HMSAS to remain active in tracking, developing, and sharing resources related to gear innovation, grant information, workshops and convenings, other knowledge sharing opportunities with relevant fleets, etc.

EFP Evaluation Framework

The FIW developed the framework to provide a simple, consistent, and transparent process for reviewing EFP performance and informing Council consideration and scoping of future regulatory actions and Fishery Management Plan (FMP) amendments, including potential new authorized fisheries, as well as recommendations related to NMFS's issuance or renewal of EFP applications. The framework includes a statement of purpose, an overall performance goal, performance metrics and benchmarks, and an evaluation process (see I.5, Supplemental Attachment 1). The FIW

recommends that the Council incorporate the framework as an appendix in the Roadmap. The sections below describe updates to the framework since the March 2026 Council meeting.

Economic Metrics and Benchmarks

The FIW developed a recommended suite of metrics and benchmarks for evaluating the economic performance of EFPs to provide insight into the viability of new fishing gear configurations, methods, and practices. The suite includes complementary metrics that provide information about different aspects of economic viability and a more holistic assessment when considered together. The FIW recommends five metrics to evaluate the economic performance of EFPs: 1) the number and percentage of EFPs fished and renewed; 2) EFP holders' views of economic viability; 3) gross profits; 4) catch per unit effort (CPUE); and 5) ex-vessel revenue. While most of the metrics are quantitative in nature, the FIW considers it important to gather qualitative and contextual information on economic viability directly from EFP holders. See the EFP Evaluation Framework (Supplemental Attachment 1) for additional details about the economic metrics and benchmarks.

Updates on Benchmark Development for Economic Metrics

The FIW recommends developing benchmarks only for the CPUE metric. The FIW calculated CPUE benchmarks using the approach described in its March 2026 report (see FIW Report 1, March 2026), with one update: the FIW used a nine-year period (2015–2023), the only period for which data were available across all fisheries (see Attachment 1).

After presenting the economic metrics and benchmarks to the Council in March 2026, the FIW decided not to develop benchmarks for gross profit or ex-vessel revenue. This decision reflects limited data availability for gross profit benchmarks and technical challenges in developing ex-vessel revenue benchmarks. In particular, comparing ex-vessel revenue per day at sea between EFPs and authorized fisheries would require using both fish ticket and observer data to standardize fishing days. The FIW agreed to retain gross profit and ex-vessel revenue as metrics but concluded that the benefits of developing benchmarks did not justify the additional complexity and effort at this time. However, the FIW recommends that the HMSMT consider further analyses comparing ex-vessel revenue from EFPs with that of authorized fisheries to inform the Council's review of EFPs.

Data Collection Needs for Economic Metrics

The FIW discussed data collection needs for two metrics: EFP holders' views on economic viability and gross profit. To better understand economic viability, the FIW expressed interest in open-ended questions or discussions with EFP holders during appropriate HMSAS and/or HMSMT meetings. The FIW is interested in information about gross profit as calculated by individual EFP holders, along with their formula for calculating crew costs. In the future, the Council could work with NMFS to develop a voluntary economic data collection form for EFP holders to address the data collection needs for both metrics, subject to Paperwork Reduction Act (PRA) compliance. Table 1 includes a summary of economic metrics and benchmarks.

Table 1: Summary of Economic Metrics and Benchmarks.

Economic Performance Metric	Type of Metric	Associated Benchmarks?	Number of Benchmarks
Number and percentage of EFPs fished and renewed	Quantitative	No	N/A
EFP holders' view of economic viability	Qualitative	No	N/A
Gross profit (per day at sea and per fishing season)	Quantitative	No	N/A
Catch per unit effort (CPUE)	Quantitative	Yes	7 (SWO = 3; All HMS = 4)
Ex-vessel revenue (per day at sea and per fishing season)	Quantitative	No	N/A

Bycatch Metrics and Benchmarks

The FIW continued work to develop a suite of metrics and benchmarks for evaluating the bycatch performance of EFPs. Similar to the economic metrics, the bycatch metrics are intended to be considered collectively, with each providing information about a different aspect related to bycatch performance. The selected metrics and benchmarks depart from what was last proposed to the Council. Notably, rather than establishing benchmarks for each priority species individually, the FIW recommends a modified approach that will evaluate the overall bycatch and the bycatch of a set priority species combined for a given fishing gear configuration, type, or practice. In addition, data on individual protected species interactions and a list of the ten bycatch species most frequently released dead will be provided by NMFS, creating a more comprehensive view of bycatch performance. As described in the framework, all bycatch comparisons will focus on bycatch species released dead. The FIW recommends four metrics to evaluate the bycatch performance of EFPs:

1. A ratio of the number of "priority" bycatch individuals released dead per 1,000 individuals retained;
2. A ratio of the overall number of bycatch individuals released dead per 1,000 individuals retained;
3. A record of all protected species interactions, including disposition; and
4. An annual list of the ten species most frequently released dead, including the number of individuals released dead.

The two bycatch-to-catch ratios include benchmarks calculated from observer data from authorized fisheries over a nine-year period. See Attachment 1 for additional details about the bycatch metrics and benchmarks. Table 2 includes a summary of bycatch metrics and benchmarks.

Table 2. Summary of Bycatch Metrics and Benchmarks

Bycatch Performance Metric	Type of Metric	Associated Benchmarks?	Number of Benchmarks
Priority bycatch-to-catch ratio	Quantitative	Yes	4
Overall bycatch-to-catch ratio	Quantitative	Yes	4
Protected species interactions	Quantitative	No	N/A
Ten species most frequently released dead	Quantitative	No	N/A

List of Priority Bycatch Species

The FIW continued developing a list to establish benchmarks for bycatch-to-catch ratios based on priority bycatch species. Initially, the FIW considered four categories: species previously identified as priority bycatch species for the Drift Gillnet (DGN) fishery; Endangered Species Act (ESA)- and Marine Mammal Protection Act (MMPA)-listed species for which at least one interaction was reported in the data included in the Final Environmental Impact Statement (FEIS) for "longline-type" EFPs; species from vulnerable taxonomic groups (e.g., sharks and rays) identified as "commonly caught" in the FEIS; and additional species or species groups of interest to the FIW (e.g., prohibited species under the HMS FMP).[1,2,3]

The FIW developed and refined the list iteratively as its approach to bycatch metrics and benchmarks evolved. The final proposed list reflects the following changes:

- Marine mammals: Removed several species that were more likely to interact with Hawaiian fisheries than West Coast fisheries or that had higher abundances.[4]
- Species groups: Removed sharks, rays, billfish, and albatross as groups because they include species with varying levels of bycatch risk. Including these groups could lead to inconsistencies between the two bycatch-to-catch ratios, as the broader metric already captures all species released dead. White sharks were retained because they are prohibited in most commercial fisheries and all recreational fisheries.
- Short-tailed albatross: Retained this species because it is listed under the ESA.

These changes reduced the list of priority species to a manageable number and will focus on those species that have special status. See Appendix C in Attachment 1 for the final proposed list. The

[1] See Supplemental FIW Report 2, November 2025.
[2] National Marine Fisheries Service. (2025). Final Environmental Impact Statement (EIS) for Consideration of Exempted Fishing Permits for Testing Fishing Practices to Target Swordfish and Other Marketable Highly Migratory Species in the United States West Coast Exclusive Economic Zone.
[3] See FIW Report 1 March 2026.
[4] The FIW removed striped dolphin, short-beaked common dolphin, California sea lion, unidentified seal, mesoplodont beaked whale, and false killer whale from the proposed list.

FIW's final recommendation is that species should be included on the list of priority bycatch species if they are:

- ESA-listed marine mammals, turtles, and seabirds;
- Other marine mammals that occur in federal waters off the West Coast; and
- White sharks, recognizing their special protections off California and their status as a prohibited species under the HMS FMP.

Evaluation Methodology for the Bycatch-to-Catch Ratio

The FIW recommends using a Bayesian methodology to compare EFP performance to the above benchmarks. This approach estimates a posterior probability distribution of the bycatch-to-catch ratio for EFPs with varying levels of effort. Estimates can be expressed as a single representative point or as a range of values that accounts for the uncertainty associated with limited data availability. The approach provides a standardized and statistically rigorous way to compare ratio metric estimates computed from limited EFP data to benchmarks from authorized fisheries with substantially more data.

Based on these developments, the FIW recommends not developing individual species/species groups benchmarks. The FIW determined that the proposed bycatch metrics and benchmarks provide a more simplified, effective, and consistent approach to inform Council decision-making related to EFPs. The FIW also discussed the potential variability in bycatch species composition among fishing gear configurations, methods, and practices as an additional reason for not developing benchmarks for individual species or species groups. Under the proposed approach, NMFS would provide a record of all protected species interactions, including disposition, based on observer data and an annual list of the ten species most frequently released dead, including the number of individuals released dead.

EFP Evaluation Process, Roles, and Schedule

The FIW continued discussions on the EFP evaluation process, including the overall process, roles, and the review schedule through its October meeting. The FIW focused on providing sufficient process-related recommendations to ensure a smooth transition to implementation while allowing for flexibility where it may be needed. The framework incorporates the FIW's recommendations on these elements (see Supplemental Attachment 1). The FIW completed the framework and recommends adoption by the Council for inclusion in the Roadmap.

HMS Roadmap Updates and Annotations

With the framework developed and pending Council adoption, several HMS Roadmap action items will be completed. The FIW recommends that the Council revise the Roadmap to include the framework as the mechanism for evaluation of EFPs and make appropriate edits to ensure consistency with the other elements (process, roles/responsibilities, review, etc.), as appropriate. In particular, the FIW notes that the first two action items under the first category ("Explore and Establish Management Strategies and Objectives") and all action items under the second category ("Develop EFP Framework") should be considered complete or revised to be consistent with the framework. The FIW recommends that the Council task the HMSMT with reviewing the HMS Roadmap and updating completed action items with annotations or references, as appropriate. Progress on all Roadmap Actions is shown in I.5, Supplemental Attachment 2.

EFP Guidance and Materials

The FIW reviewed input from the 2024 HMS Roadmap Workshop on developing guidance and materials for EFP applications. In March 2026, the FIW presented the recommendations below to the Council (see March 2026 FIW presentation). In April 2026, the Council directed staff to pursue improvements to EFP processes across FMPs, including developing clear application materials to help applicants navigate the process (see April 2026 Decision Summary Document). The FIW's recommendations below remain consistent with this direction:

- Direct Council staff to support NMFS in developing materials such as infographics (such as flow charts or timelines) and Frequently Asked Questions (FAQs) to help EFP applicants understand and navigate the EFP process. Council staff will also update Council resources such as the EFP landing page and HMS Roadmap-related documents.
- Direct the HMSAS and HMSMT to schedule time at their in-person meetings for applicants to informally discuss potential ideas for EFPs and receive HMSAS and/or HMSMT feedback. These early interactions will assist applicants with submitting successful EFP applications.

The FIW recommends that the Council continue to prioritize these tasks, including delegating staff and/or Advisory Bodies, as appropriate, to work with NMFS toward implementation.

Relevant Innovative Tools and Measures

The FIW discussed a number of ideas, resources, and tools that could support additional innovation development in HMS fisheries. The FIW recognizes that many of the concepts have been covered previously in the 2024 HMS Roadmap Workshop, and these recommendations are still relevant for action by the Council. The FIW notes that many opportunities, particularly related to funding, are constantly changing and several priorities are particularly relevant for accomplishing the goals of the Roadmap. The FIW provides the following recommendations to the Council:

- Establish and maintain a web page (in coordination with NMFS) with key resources to support HMS fishery participants interested in EFP opportunities (see EFP Guidance and Materials recommendations above).
- Establish and maintain a web page with information regarding grants and other sources of funding to support innovation, cooperative research, marketing opportunities, relevant state and federal programs, and other resources. (Note: this website could serve all species, not just HMS.)
- Encourage the HMSAS to remain active in tracking, developing, and sharing resources and information related to gear innovation (e.g., compilations of results from testing/using different fishing gear configurations, methods, and practices across regions), grants and funding sources, applicable workshops and convenings, other knowledge sharing opportunities across relevant fleets (e.g., Hawaii, East Coast, Gulf), etc. The HMSAS could bring forward concepts for future Council consideration.

Overall Status of the FIW's Work

With the completion of the framework, the FIW has accomplished all the tasks within its charge (see November 2024 Decision Summary Document). Several items in the FIW's charge were completed previously and have already resulted in Council action, including modifications to Council Operating Procedure (COP) 20. Other items, including the framework, remain for Council consideration at the November 2026 meeting. Table 3 summarizes the FIW's completed tasks, completion dates, corresponding Council actions, and items for consideration at the November Council meeting.

Table 3. Work Status of Items in the FIW's Charge

FIW Task	Date Completed	Council Action	For Consideration in Nov 2026?
Modification of COP 20 – HMS EFP process	Recommendations provided in March 2026	Modifications adopted in June 2026	No, complete
Improvement of HMS EFP guidance	Recommendations provided in March 2026	Guidance provided in April 2026 as part of Special Project 1	Yes
Development of HMS EFP goals and metrics to evaluate EFP performance[5]	Status update provided in Nov 2025; draft framework provided in March 2026; final framework provided for Nov 2026	Provided guidance in Nov 2025 and March 2026	Yes
Consideration of the National Seafood Strategy as it pertains to HMS fisheries	Staff attachment "NMFS's National Seafood Strategy and Alignment with the Draft HMS Roadmap" submitted at the June 2025 Council meeting	N/A	No, complete
Review of the draft HMS Roadmap, as appropriate	Recommendations provided in Nov 2025 and March 2026, and provided for Nov 2026	Modifications adopted in Nov 2025 and March 2026	Yes, for future direction
Discussion of relevant innovative fishery tools or measures needed to support a robust HMS fishery	Recommendations provided for Nov 2026	Pending review of recommendations	Yes

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[5] The FIW's original charge included the development of "acceptable levels of bycatch." In March 2026, the Council amended the HMS Roadmap to remove this element and instead focus on the development of bycatch benchmarks.