HABITAT COMMITTEE REPORT ON
FISHERY ECOSYSTEM PLAN INITIATIVES APPENDIX AND NEW INITIATIVE

The Habitat Committee (HC) received an update on the Fishery Ecosystem Plan Initiatives and discussed the revised draft Fishery Ecosystem Plan (FEP) Appendix (Agenda Item H.1.a, EWG Report 1, September 2022) and the Ecosystem Workgroup (EWG) Report on Fishery Ecosystem Plan Initiatives (Agenda Item H.1.a, EWG Report 2, September 2022). The HC offers the following comments and suggestions below.

The HC believes that Initiative 2.1, *Ecosystem and Climate Information for Species, Fisheries, and FMPs* should be a high priority for several reasons. Initiative 2.1 would provide relevant information relating climate conditions to Council-managed stocks and is a logical next step from the Ecosystem Status Report. This initiative would integrate well with the stoplight charts used in the Ecosystem Status Report and other risk-based management approaches, such as the Oregon Coho harvest rule. This initiative would also provide needed information to complete Initiatives 2.6 *Supporting Fishery and Fishing Community Resilience* and 2.10 *Climate-Informed Fisheries Management Initiative*. The HC supports the EWG's proposed schedule of beginning with Initiative 2.1 and potentially sequencing through Initiatives 2.6 and 2.8 to complete 2.10 dependent on the information gained through the development of Initiative 2.1.

The HC offers specific revisions (attached) to Initiative *2.4 Cross-FMP EFH*. A cross-Fishery Management Plan (FMP) initiative could be valuable but does not need to be focused solely on essential fish habitat (EFH). The HC believes the initiative could be focused on understanding spatial distribution of species across FMPs and use species distribution models to inform predictions for different species groups across those FMPs to inform Federal actions. This modeling approach would help identify key locations where management actions could have impacts across multiple FMPs. This initiative might be more relevant when the EFH updates for coastal pelagic species and highly migratory species are finalized.

PFMC
9/12/22

Attachment: Habitat Committee recommended edits to 2.4 Cross-FMP EFH Initiative

The MSA defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity" [16 U.S.C. §1802]. All four of the Council's FMPs have described EFH for managed species, with the groundfish FMP having the most detail, including closed areas to protect EFH. Because of the widely ranging level of EFH detail across FMPs, seeing the "forest for the trees", i.e., documenting where habitat actions have big ecosystem impacts, is ~~it may be~~ difficult without a ~~to develop a holistic, ecosystem-based~~ cross-FMP understanding. ~~EFH initiative.~~

This ~~An~~ initiative ~~that~~ takes a species distribution modeling approach to understand where spatial and temporal overlaps occur for species included in each of the FMPs ~~would allow for the identification of biological hotspots that may contain habitat components critical to species across FMPs.~~ Many species distribution models have been completed as part of compiling data and projecting species distributions for stock assessments; additional effort could focus on the appropriate suite of species from FMPs and standardizing oceanographic and climate predictors for use across species distribution models. In addition, working through the NOAA Fisheries DisMAP initiative, this could highlight both current areas of habitat overlap as well as lead to predictions for how these overlaps may change under different climate scenarios.

This initiative would help identify ~~would take an ecosystem-based Council approach to EFH to provide a better understanding of complex overarching issues such as: research needs,~~ commonalities to EFH across FMPs, identify habitat areas that are considered highly productive or biodiverse under more than one FMP, help predict potential impacts of ~~threats to habitat quality, protected species interactions, or ocean acidification and~~ climate variability and change to multi-species EFH, and help identify future research needs. ~~An ecosystem-based EFH review could provide required updates for FMPs, and would work across FMPs to identify habitat areas that are considered highly productive or biodiverse under more than one FMP.~~ Habitats of importance to species from multiple FMPs could serve as focal points for Council efforts to assess and mitigate for fishing and non-fishing effects on EFH, and for research to better understand the complex interactions between FMP species and their shared habitat. One possible result of an integrated EFH review would be cross-FMP Habitat Areas of Particular Concern (HAPC) designations for areas that are important to species from multiple FMPs. Another result could be consideration of spatially and temporally variable EFH and HAPCs that align with when managed species are using important habitat at key life stages, with consideration of non-static habitat and marine features such as upwelling fronts. This initiative would address FEP Objectives 1a, 3c, and 4a.

~~The Council could also expand or refocus this initiative to support marine planning policy processes.~~ With the impending rise of offshore non-fishing activities, a cross-FMP EFH review could help the Council, other agencies, and the public better understand how those activities might interact with and affect ocean habitat and prioritize those habitats that are most important. Council attention to EFH across its FMPs could spur improvements in digitizing multi-species EFH maps for a better understanding of where our species' EFH overlap, and could support work on models to forecast range shifts due to ~~in~~ ocean conditions. ~~For example, Barceló et al. (2021) use a pelagic seascape approach to model epipelagic fish and macro-invertebrate community structures off the coasts of Oregon and Washington. They suggest that by combining community metrics and readily~~

~~available remote sensing data it may be possible to predict species composition in the pelagic zones of the CCE.~~

This initiative would build on work proposed under Initiative 2.2, Science Policy and Planning for Understanding the Effects of Oceanographic Conditions and Recruitment on Council-Managed Finfish Species. To implement this initiative, the Council could task its Habitat Committee, science center representatives, or members of ~~or assemble~~ an ad hoc advisory committee, to cooperatively review species distribution models from different FMPs to develop a suite of species with which to incorporate in this initiative. ~~EFH designations under all four FMPs, and to discuss the potential effects of climate variability and change on EFH. This committee could also review whether the EFH designations consider the full life-histories of the species being managed under the FMPs, with a focus on vulnerable life-history stages, and where shared habitat/EFH exists.~~ For ~~the~~ many species ~~where the~~ juvenile life history stages are less ~~is less~~ well understood, so this approach might best be applied to pre-recruit or adult life stages. The cross-FMP distributions could be utilized by the Council, advisory bodies, and state and federal authorities to better project potential habitat and climate impacts across FMPs. ~~Therefore, this initiative might build on work proposed under Initiative 2.2, Science Policy and Planning for Understanding the Effects of Oceanographic Conditions and Recruitment on Council-Managed Finfish Species. Whether this initiative is taken up by the HC or another advisory committee, the committee should include representatives from the Habitat Committee, Ecosystem Workgroup, and Marine Planning Committee, plus any additional habitat scientists, restoration specialists, mapping specialists, and others the Council deems appropriate to the task.~~