SUPPLEMENTAL HABITAT INFORMATION AND ERRATA FOR CORDELL BANK FISHERY REGULATION CHANGES

Supplemental Habitat Information

During the Habitat Committee (HC) webinar on October 29th and 30th, Pacific Fishery Management Council (Council) staff and HC members discussed an additional data layer from the Pacific Marine and Estuarine Fish Habitat Partnership (PMEP) that was excluded from the first draft of the Analysis (Agenda Item I.5, Attachment 1). Initially, this data layer was not used because the source data for the area in question had a low data quality score (described on next page); however, the HC recommended it be used regardless of the low data quality score because it may be helpful for the Council and its advisory bodies to consider in their deliberations surrounding Cordell Bank. Figure 1 below shows the areas to be opened to bottom trawl and nontrawl commercial and recreational gears under Alternative 1 utilizing the substrate classification contained in PMEP's West Coast Nearshore Coastal and Marine Ecological Classification Standard Substrate cartography (CMECS) Habitat dataset for detail (CMECS SC Cartography Detail) and the final data quality scores (PMEP 2024). The cartography detail layer shows the most detailed CMECS classification available for that location and the code of the classification. As an example, rock and unconsolidated mineral substrate are substrate classes whereas sand is a substrate group contained within the unconsolidated mineral substrate class. Within the CMECS hierarchy, a substrate group represents two levels of increased resolution compared to a substrate class. The following is a description of each of the three types of substrate classifications:

- Rock substrate: Igneous, metamorphic, or sedimentary rock with particle sizes greater than or equal to 4.0 meters (4,096 millimeters) in any dimension that cover 50 percent or greater of the Geologic Substrate surface.
- Unconsolidated Mineral Substrate: Geologic Substrates with less than 50 percent cover of Rock Substrate. This class uses Folk (1954) terminology to describe any mix of loose mineral substrate that occurs at any range of sizes—from Boulders (> 80 percent gravel, with a median grain size 256 mm to < 4,096 mm) to Clay (containing no trace of gravel and < 10 percent sand; the remaining clay-silt mix is 67 percent or more clay).
- Sand: Geologic Substrate surface layer contains no trace of Gravel and is composed of > 90 percent Sand (particles 0.0625 millimeters to < 2 millimeters in diameter)

With respect to data quality, there are four scores present in this area with higher scores meaning higher data quality. The scheme for scoring data quality used in this dataset was created for the West Coast Substrate Induration Layer developed for the Bureau of Ocean Energy Management for coral suitability modeling (Poti et al 2020). This scoring scheme has three fundamental components (or categories): data type, interpretation type¹, and groundtruthing. Further details can

¹ Two interpretation types are available: supervised (e.g., machine learning or expert interpretation) and unsupervised (e.g., Terrain Ruggedness (VRM))

be found under the "Lineage" portion of the metadata for the PMEP substrate data quality layer.² The four scores present in the action area are defined as follows:

- 19- Low resolution, supervised, no groundtruthing
- 43- Medium resolution, supervised, no groundtruthing
- 62- High resolution, unsupervised, no groundtruthing
- 86- High resolution, supervised, limited groundtruthing

Using the data available from PMEP, the 10.2 sq. mi. area that is proposed to be opened to bottom trawling (which would also be opened to all non-trawl commercial and recreational gears) is primarily comprised of sand (Figure 1; purple polygon). Table 1 describes the sources present in this 10.2 sq. miles along with the data quality score and the percentage of the area each source/score is associated with. Compared to Figure 1, Figure 8 in Agenda Item I.5, Attachment 1 (page 18) does show that there is mixed substrate based on Office of National Marine Sanctuaries (ONMS) predictive substrate models in some portions of this 10.2 sq. mi. area. The ONMS notes that the remainder of the area has not been surveyed.

For the additional 30 sq. mi. to be opened to all non-trawl commercial and recreational fisheries (i.e. no restrictions to gear as under No Action where only hook and line gears for flatfish species are permitted) under Alternative 1 (outlined in green below, excluding the purple outlined region), the hard sloping substrate depicted in ONMS predictive substrate models (Figure 9 of Agenda Item I.5, Attachment 1) generally aligns with the CMECS substrate classification provided in Figure 1 below. The similarity between the two figures on the bank is due to the same underlying data source- but with different interpretation and map production methods.

While these two datasets are not directly comparable given that one is based on the CMECS classification while the ONMS data is predicted substrate, it may be possible to use these two datasets in concert to draw a reasonable inference. For example, if one dataset lacks information in a certain area, while the other may provide substrate information, a reasonable conclusion may be drawn. Conversely, if one dataset indicates the substrate within an area contains a range of substrate types (e.g., hard to cobble) and the other suggests the substrate to be similar, an inference may be drawn as to the likely substrate, while considering the robustness of each dataset.

² See PMEP website at https://www.pacificfishhabitat.org/data/nearshore-cmecs-substrate-habitat/ to download



Figure 1. CMECS Substrate Component Cartography Detail and Data Quality Score in relation to the areas proposed to be opened under Alternative 1.

Table 1. Data sources, quality scores, and corresponding areas for the proposed area to be opened to trawling (as well as commercial non-trawl and recreational gears) under Alternative 1.

				Data	Area within proposed	% of area within
			Year Data	Quality Final	trawl opening (sq	proposed trawl
Dataset Name	Data Source	Data Type	Published	Score	mi)	opening
Cordell Bank	Seafloor Mapping Lab at California	Remote sensing interpretations;				
Habitat Map	State University Monterey Bay	ground-truth	2005	86	0.3	2.9%
	Oregon State University, Active Tectonics & Seafloor Mapping Lab (AT&SML), NOAA Fisheries Northwest Fisheries Science Center, and the Bureau of Ocean Energy					
EFH Mapping	Management	Data Compilation	2011-2014	19	7.5	73.5%
	Oregon State University, Active Tectonics & Seafloor Mapping Lab (AT&SML), NOAA Fisheries Northwest Fisheries Science Center, and the Bureau of Ocean Energy					
EFH Mapping	Management	Data Compilation	2011-2014	43	2.4	23.5%
	Oregon State University, Active Tectonics & Seafloor Mapping Lab (AT&SML), NOAA Fisheries Northwest Fisheries Science Center, and the Bureau of Ocean Energy					
EFH Mapping	Management	Data Compilation	2011-2014	62	0.01	0.1%

<u>Errata</u>

California Department of Fish and Wildlife (CDFW) staff alerted Council staff to an error related to the number of anglers that may be affected from Bodega Bay shown in <u>Table 4 of Agenda Item</u> <u>I.5, Attachment 1</u>. Table 2 below shows the corrected number of anglers.

Table 2: Number of angler trips targeting groundfish outside of 3nm in the party/charter and private/rental boat modes at Bodega Bay recreational angler sampling sites from 2019-2023 by mode (RecFIN, 10/22/2024)

Year	Party/Charter Boats	Private/Rental Boats
2019	0	17
2020	0	6
2021	0	16
2022	0	14
2023	116	303

References

Pacific Marine and Estuarine Fish Habitat Partnership (PMEP). 2024. West Coast USA Nearshore CMECS Substrate Habitat. Portland, OR: Pacific States Marine Fisheries Commission. https://www.pacificfishhabitat.org/data/

Poti, M., S.K. Henkel, J.J. Bizzarro, T.F. Hourigan, M.E. Clarke, C.E. Whitmire, A. Powell, M.M. Yoklavich, L. Bauer, A.J. Winship, M. Coyne, D.J. Gillett, L. Gilbane, J. Christensen, and C.F.G. Jeffrey. 2020. Cross-Shelf Habitat Suitability Modeling: Characterizing Potential Distributions of Deep-Sea Corals, Sponges, and Macrofauna Offshore of the US West Coast. Camarillo (CA): US Department of the Interior, Bureau of Ocean Energy Management. OCS Study BOEM 2020-021. 267 p.