

## Nearshore and Estuary Habitat Data

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### National Fish Habitat Partnership

Mission is to protect, restore, and enhance fish and aquatic communities through partnerships that foster fish habitat conservation







www.fishhabitat.org

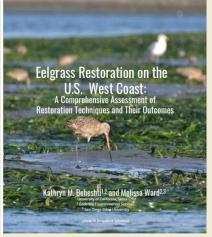
# Pacific Marine and Estuarine Fish Habitat Partnership

- Gathers expertise to synthesize best available information estuaries, nearshore, and connectivity
- Develops and compiles new datasets to fill high-priority data gaps in our understanding of fish habitats
- Provides targeted funding for highpriority restoration and conservation projects





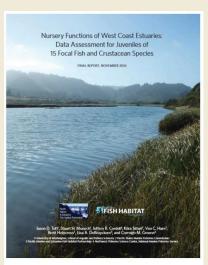
### Assessments, Reports, & Literature



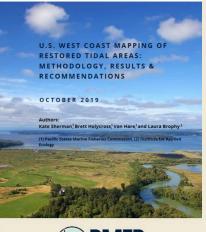




Eelgrass Restoration Synthesis on the U.S. West Coast (2021)



Nursery Functions of West Coast Estuaries: Data Assessment for Juveniles of 15 Focal Fish and Crustacean Species (2015)





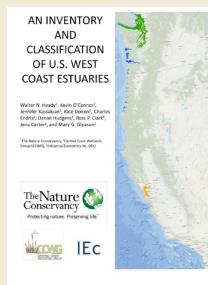
U.S. West Coast Mapping of Restored Tidal Areas: Methodology, Results & Recommendations (2019)



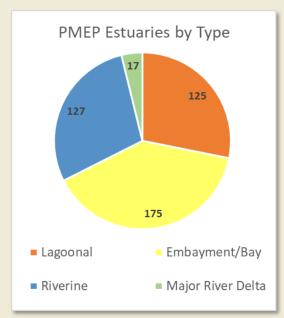
Nursery Functions of U.S. West Coast Estuaries: The State of Knowledge for Juveniles of Focal Invertebrate and Fish Species (2014)

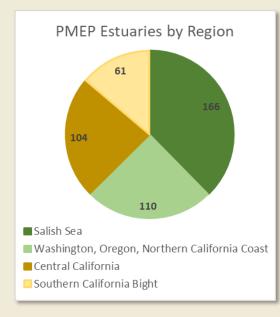


Eelgrass Habitats on the U.S. West Coast: State of the Knowledge of Eelgrass Ecosystem Services and Eelgrass Extent (2018)



An Inventory and Classification of U.S. West Coast Estuaries (2014)





### **444 Estuaries Mapped**



# Tracking Estuarine Wetland Restoration in Puget Sound





- The Estuary Vital Sign indicator tracks the amount of land returned to full, natural tidal flooding in Puget Sound's 16 large river deltas
- PMEP's Estuary Extent dataset was used to determine the full potential estuary (including disconnected areas) to determine upper limit of delta boundaries.
- Restoration projects completed within the "potential estuary" are summarized to assess total area of estuarine wetlands restored as part of the Estuaries Vital Sign targets.



Ramirez, M. 2019. Tracking Estuarine Wetland Restoration in Puget Sound; Reporting on the Puget Sound Estuaries Vital Sign Indicator. Report prepared for the Puget Sound Partnership at the University of Washington, Seattle, WA.

## Nearshore Habitat Report and Data

- Identified need to understand large-scale processes and connectivity between species and habitats for nearshore and offshore along the U.S. West Coast
- To provide the best available science and inform opportunities to conserve, protect, restore, and enhance fish habitat in nearshore areas

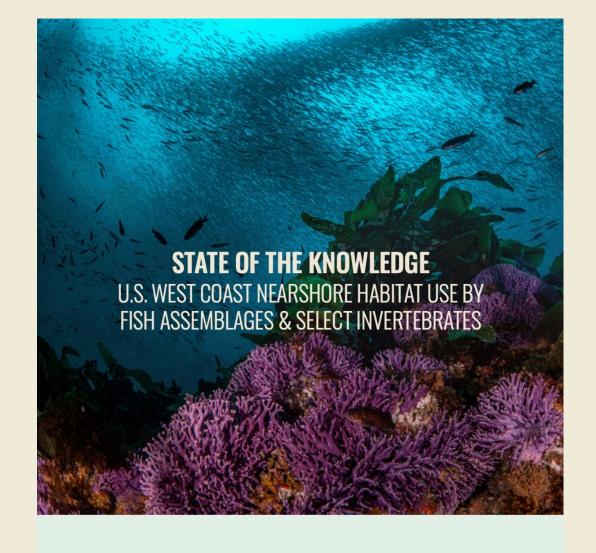
Joseph J. Bizzarro<sup>1</sup>, Jamey Selleck <sup>2</sup>, Kate Sherman<sup>3</sup>, Joan Drinkwin<sup>2</sup>, Van C. Hare<sup>3</sup>, David S. Fox<sup>4</sup>

1 UC Santa Cruz

2 Natural Resources Consultants

3 Pacific States Marine Fisheries Commission

4 Oregon Department of Fish and Wildlife



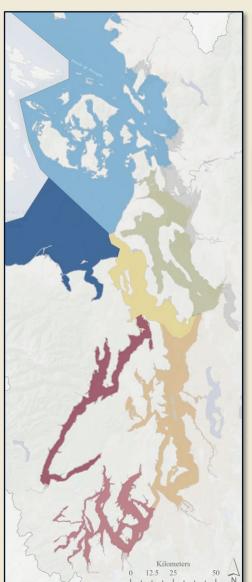


### **Ecoregions & Subregions**

## **Depth** (CMECS aquatic setting subsystem)

Habitats (CMECS substrate and biotic components)





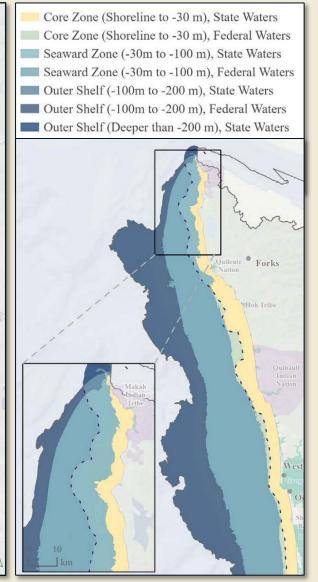














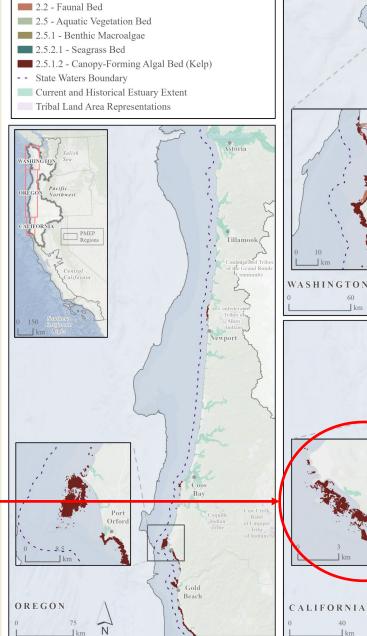
Photo by Adam Obaza Fish art by Joe Tomelleri Invertebrate art by Claudia Makeyev

# Pacific Northwest CMECS Substrate Habitat 1.1 - Rock Substrate 1.2 - Unconsolidated Mineral Substrate 1.2.1 - Coarse Unconsolidated Substrate 1.2.2 - Fine Unconsolidated Substrate 2 - Biogenic Substrate 3 - Anthropogenic Substrate 9.9.9.9.9 - Unclassified - State Waters Boundary Current and Historical Estuary Extent Tribal Land Area Representations

### **Biotopes** Rock and Kelp In Core Zone (0 - 30m)

OREGON

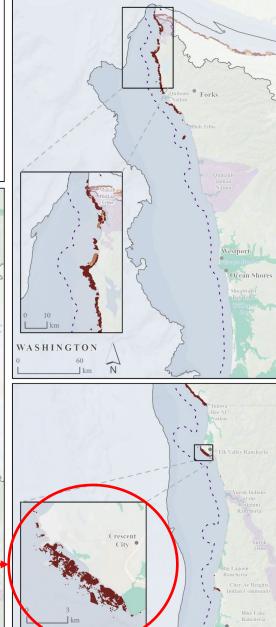




Pacific Northwest
CMECS Biotic Habitat

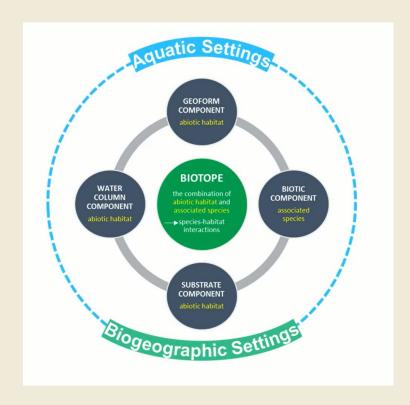
1.2 - Floating/Suspended Plants and Macroalgae

2 - Benthic/Attached Biota



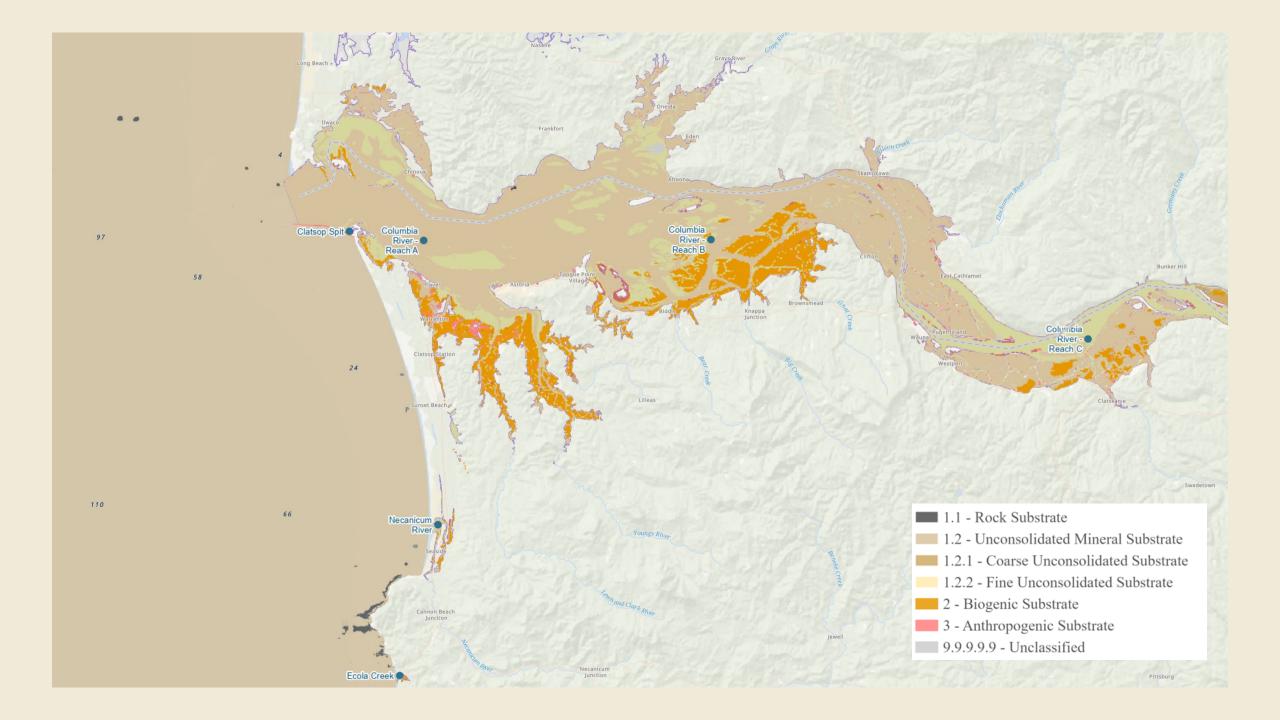
### **West Coast Spatial Framework**

## Coastal Marine and Ecological Classification Standard (CMECS)



Recognized by the FGDC as the federal standard for classifying coastal and estuarine habitats





### Rocky Reef Spatial Data Update













- NOAA Fisheries and Pacific Fishery Management Council staff identified a need to update the spatial data for the Rocky Reef Habitat Areas of Particular Concern (HAPC)
- NOAA Fisheries is currently using the updated substrate data in planning of OSW development off the West Coast, but the spatial data will also inform an upcoming review by PFMC of groundfish essential fish habitat beginning in 2025
- PMEP's CMECS substrate dataset was identified as the best available source for West Coast nearshore substrate data
- PSMFC GIS staff are engaged in the working group for the current update to the Rocky Reef spatial data



#### **Data Products**

Home → Data Products

### **Applications**



PMEP West Coast Estuary Viewer

This map viewer highlights spatial data products developed by PMEP to characterize habitats and synthesize information in support of habitat conservation and restoration goal setting. Most of the data presented in this viewer are available for download below.



**West Coast Estuaries Explorer** 

This application is useful for quickly comparing estuaries to each other along the coastlines of Washington, Oregon, and California. Using dynamic filters and an interactive map you can find estuaries that meet specific criteria; or estuaries that provide habitat for focal species of interest to you.



West Coast USA Current and Historical Estuary Extent

This layer represents the current



PMEP Estuary Points

This layer represents estuaries, as points, in the Pacific Marine and



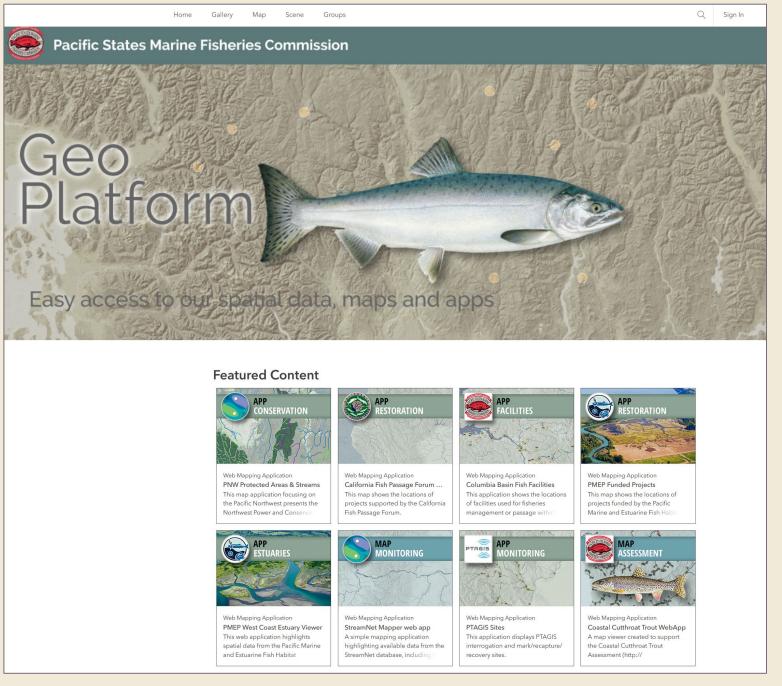
West Coast USA Estuarine Biotic Habitat

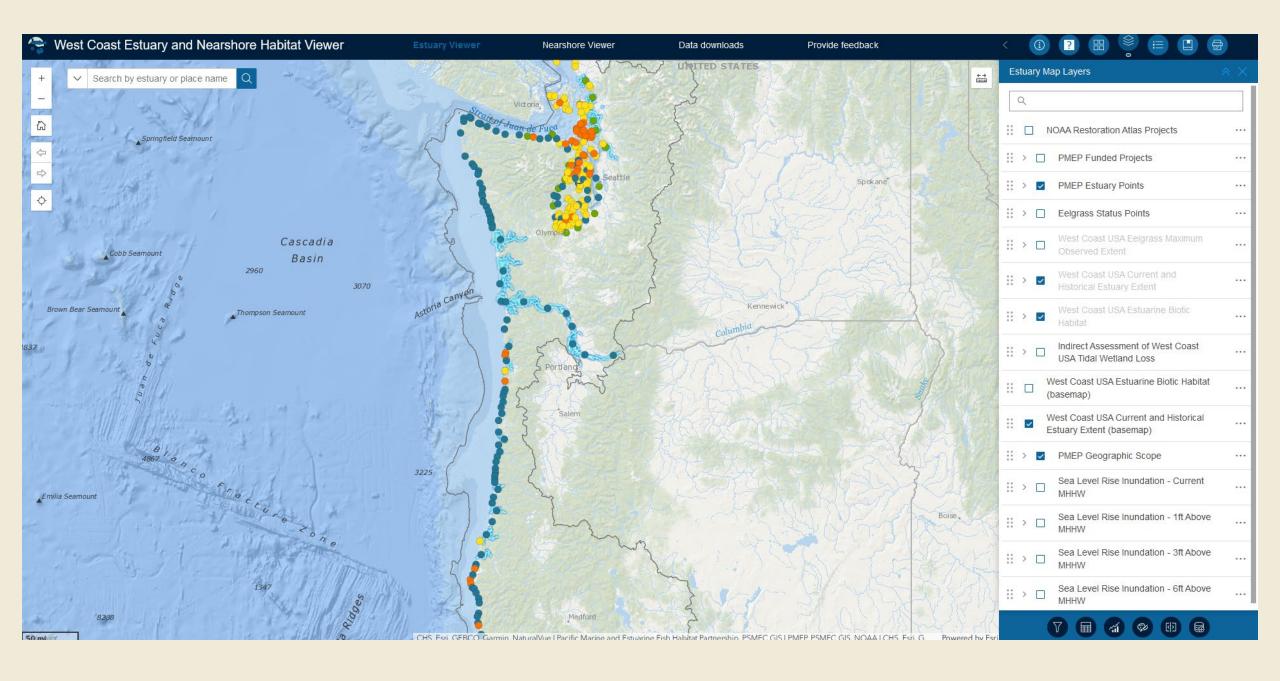
These data represent the Biotic



Indirect Assessment of West Coast USA Tidal Wetland Loss

### https://www.pacificfishhabitat.org/data





# Data Training and Videos







- PMEP partners with the National Estuarine Research Reserve system to host virtual trainings to provide training on PMEP's data and applications
- Past trainings hosted through Padilla Bay NERR and South Slough NERR, reaching out to CA NERRs for additional trainings
- In October 2024, professionally recording 6 "how-to" videos to supplement hands-on trainings, available on PMEPs website in December 2024

