Pacific Marine and Estuarine
Fish Habitat Partnership (PMEP)
Nearshore Data Request

Nearshore project overview: This effort is part of a NOAA-funded project to expand PMEP's spatial data framework to include nearshore areas. PMEP is developing a “State of the Knowledge” report on West Coast nearshore habitats. The report will identify typical fish and select invertebrate assemblages (based on ecosystem and management importance) within nearshore habitats, identify data gaps and how they can be filled, define connectivity among habitat types and with estuarine and offshore systems, identify management issues (including discussion of stressors), and develop recommended next steps for the further protection and conservation of nearshore fish habitats. As a supplement to the report, PMEP will define and map boundaries for delineating nearshore zones along the U.S. West Coast, and compile and standardize spatial data on nearshore habitats within the zones.

Data needs: We are seeking spatially interpreted data (in either vector or raster format) identifying nearshore fish and invertebrate habitats (substrate, biotic, and water column component). We are placing a priority on datasets with a large spatial footprint that consistently map a habitat feature or features for large segments of the coast (preferably 10's to 100's of kilometers). For this project, PMEP is identifying the core nearshore as the upper end of the splash zone to -30m depth. In addition, PMEP is requesting data that extends beyond -30m to -100 (Seaward Zone) since many nearshore fish and invertebrates use habitats deeper than -30m. We are not currently looking for data from estuaries, however, we are looking for data for the nearshore of Puget Sound while recognizing that the Sound itself is classified as an estuary.

How the data will be used: Your data will be standardized into a database owned by PMEP, referred to as PMEP’s Spatial Data System (SDS), housed at the Pacific States Marine Fisheries Commission. PMEP will use the Coastal Marine & Ecological Classification Standard, the federal data standard recommended by NOAA, to classify datasets (see here for more details). Data will be used as part of PMEP's nearshore fish habitat review report. Your dataset will be acknowledged in all PMEP and National Fish Habitat Partnership (NFHP) publications that use your data.

Data request: PMEP has undergone an initial data search, and has identified a variety of existing nearshore substrate and biotic datasets. This data request is targeting geographic areas or specific habitat types with known data gaps. We are also looking for data for certain geographic areas and habitat types where we currently have data, but are checking to see if there are updates or more detailed data available. We identify below the substrate and biotic datasets we have already identified. Additional lists and maps help illustrate PMEP's current data needs.

If you would like to contribute data to this effort, please contact Kate Sherman, PMEP’s Data Management Specialist, at ksherman@psmfc.org OR 503-595-3100. Kate will facilitate the data exchange and discuss any follow-up questions or requests surrounding your data. Please contact Kate by January 31, 2020 to contribute data to this effort.
Substrate Datasets Currently Identified Include:
- Essential Fish Habitat / SGH V4: WA, OR, N.CA coast including Strait of Juan de Fuca (OSU/NOAA)
- Skagit County Intertidal Habitat Inventory
- Whatcom County Intertidal Habitat Inventory
- Olympic Coast National Marine Sanctuary SGH/CMECS data
- USGS Map Series
  - Southern Salish Sea
  - California State Map Series
- Oregon State Map Series (OSU / ODFW)
- CSUMB Seafloor Mapping Lab
  - California State Map Series
- Predicted Nearshore Benthic Substrates of California (CDFW)
- Ocean Imaging Multispectral Imagery North Coast / South Coast, CA MPA Baseline
- Channel Islands National Marine Sanctuary Mapping
- Golden Gate National Recreation Area Mapping
- Seafloor Habitat Mapping San Diego County (SANDAG)

Substrate data needs (by West Coast Region):
The following maps and geographic descriptions identify data gap areas, and areas with data updates requested.
SUBSTRATE DATA REQUEST
Salish Sea (Puget Sound and Strait of Juan de Fuca):
- Intertidal zone and areas shallower than –10m
- Strait of Juan de Fuca (except Elwha River mouth)
- Strait of Georgia (except San Juan Islands, Skagit County, Whatcom County)
- North Central Puget Sound (except Admiralty Inlet around Port Townsend)
- South Puget Sound
- Hood Canal

Washington / Oregon / Northern California Coast (Cape Flattery to Point Arena)
- Intertidal zone and areas shallower than –10m for entire segment of coast
- Off the coast of Ozette to Pacific Beach
- South of Gray's Harbor, WA to north of Columbia River mouth
- South of Columbia River mouth to Gearhart
- Areas between Newport and Coos Bay (areas that have not been mapped by Oregon State Waters Mapping Program)
- Off the coast of Lane and Douglas County, Oregon
- Outside of Coos Bay and northward
- South of Bandon to just north of Cape Blanco State Park
- Sisters Rock south to Cape Sebastian
- California boarder to Point Arena: data with more detailed classification (more than hard/soft, using systems such as CMECS, Greene or SGH) and ground truthed interpretations

Central California (Point Arena to Point Conception including San Miguel Island, Santa Rosa Island, and San Nicolas Island)
- Interpreted empirical data for intertidal zone and areas shallower than –10m for the entire segment of coast
- North of Salt Point, CA to Point Arena: data with more detailed classification (more than hard/soft, using systems such as CMECS, Greene or SGH) and ground truthed interpretations
- South of Carmel River State Beach to Point Arguello: data with more detailed classification (more than hard/soft, using systems such as CMECS, Greene or SGH) and ground truthed interpretations

Southern California Bight (south of Point Conception including Santa Cruz Island, Santa Catalina Island, and San Clemente Island)
- Interpreted empirical data for intertidal zone and areas shallower than –10m for the entire segment of coast
- Border of Ventura and Los Angeles County to Dana Point: data with more detailed classification (more than hard/soft, using systems such as CMECS, Greene or SGH) and ground truthed interpretations
- South eastern section of San Clemente Island

Biotic Datasets Currently Identified Include:
- Intertidal habitat inventory (Skagit and Whatcom County)
- Environmental Sensitivity Index
- Nearshore habitat (Ocean Imaging)
  - North Central CA Coast
  - Anacapa Island
• Eelgrass
  o West Coast Eelgrass Extent (PMEP) *this is a compilation of sources from across the West Coast including WA DNR, CDFW, ODFW datasets.*
• Kelp (canopy forming kelp)
  o West Coast Floating Kelp
  o WA Outer Coast Kelp Mapping (WA DNR)
  o California (CDFW)
  o Oregon Kelp (ODFW)
• Surfgrass
  o WA DNR Seagrass Mapping
  o CA (CDFW)
• Coral
  o Predicted deep sea coral (NOAA/EFH)

Please note:
• *We are aware of the Shorezone datasets for WA and OR, as well as the Environmental Sensitivity Index (ESI) datasets that identify intertidal habitats for all 3 states (WA, OR and CA). Currently these datasets are mainly available in line format, and we are in search of polygon datasets. These datasets will be incorporated into PMEP's Nearshore effort report.*
• *There are many site-specific datasets identify the extent of biotic habitat types throughout the Salish Sea and West Coast. We are currently interested in regionally assessed habitats at this time (for example, on a county wide scale (Whatcom County Intertidal Habitat Inventory) or other regional assessments (North Central CA coast).*

Biotic data needs (by Habitat Type):
• Mollusk Reef Biota (Mussel, Oyster, Clams, Gastropods)
• Coral Reef Biota
• Attached fauna (anemones, barnacles, basket stars, brittle stars, crinoids, etc.)
• Soft sediment fauna (Sea whip, sea anemone, sand dollar beds)
• Microbial communities
• Lichen communities
• Understory algae (kelp and other macroalgae)
  o Leathery/leafy Algae
  o Sheet algae
  o Turf Algae
• Planktonic Biota (Phytoplankton, Zooplankton, Floating/Suspended Plans and Macroalgae)
• Aquatic Vascular Vegetation (*Phyllospadix scouleri, Ruppia maritima, Phyllospadix torreyi*)
Planktonic Biota
- Zooplankton
  - Floating/Suspended Plants and Macroalgae
    - Phytoplankton

Benthic/Attached Biota
- Reef Biota
  - Mollusk Reef Biota
    - Clam Bed
    - Oyster Bed
    - Mussel Bed
  - Coral Reef Biota
    - Colonized Deepwater/Coldwater Reef Faunal Bed
      - Attached Fauna
        - Diverse Colonizers (e.g., anemone, mussel, etc.)
          - Anemones
          - Barnacles
          - Basket Stars
          - Bryozoans
          - Chitons
          - Corals
          - Crinoids
          - Clam Bed
          - Oyster Bed
          - Mussel Bed
          - Sand Dollar
          - Sponges
          - Sea Star (starfish)
          - Tunicates
          - Sea Urchins
          - Abalone
  - Soft Sediment Fauna
    - Diverse soft sediment fauna
      - Sea whip
      - Sea anemone
      - Sand dollar beds
  - Microbial Communities
  - Lichen Communities
  - Aquatic Vegetation Bed
    - Canopy-Forming Algal Bed
    - Macrocystis Communities
    - Mixed Kelp Communities
    - Nereocystis Communities
    - Leathery/Leafy Algal Bed
    - Sheet Algal Bed
    - Turf Algal Bed
  - Aquatic Vascular Vegetation
    - Seagrass Bed
      - Phyllospadix scouleri
      - Phyllospadix torreyi
      - Zostera marina
      - Zostera japonica
      - Zostera pacifica
  - Freshwater and Brackish Tidal Aquatic Vegetation
    - Ruppia maritima

PMEP Nearshore: CMECS Biotic Component
Red and pink text indicate known data gaps