

## PACIFIC COAST JUVENILE FISH HABITAT ASSESSMENT

The Pacific Marine and Estuarine Fish Habitat Partnership is working with partners on the West Coast to conduct a coastwide juvenile fish habitat assessment. Two key initial steps in the assessment were to conduct an inventory and classification of Washington, Oregon and California estuaries, and complete a State of the Knowledge Report on nursery functions of West Coast Estuaries. The results of these two steps will help inform overall assessment goals and activities:



The geographic scope of the PMEP (highlighted in green) Map credit: Van Hare, PSMFC

#### Assessment Goals

- in West Coast estuaries.
- Advance understanding of the nursery requirements of 15 fish and shellfish species.  $\blacktriangleright$  Review the current state of science in terms of restoration and protection of juvenile fish habitat in estuaries.
- needed to prioritize restoration and protection. West Coast estuaries.
- Describe juvenile fish habitat use of estuaries Advance understanding of nursery functions of
- Improve understanding of spatial frameworks supporting estuary habitat conservation. Provide an authoritative geodatabase for information on West Coast estuaries and their nursery functions.

Coast estuaries and contribute to our recreational and commercial fish stocks.



Update wetland delineation and habitat types

The outcomes from the assessment will inform prioritization of restoration activities in West understanding of how juvenile fish habitat in estuaries influences the production and health of

### State of the Knowledge Report

The University of California Santa Cruz, SeaSpatial Consulting, Monterey Bay National Marine Sanctuary, Elkhorn National Estuarine Research Reserve, Hopkins Marine Station-Stanford University, The Nature Conservancy, and NOAA Northwest Fisheries Science Center assembled information on geospatial data of estuarine nursery habitats for 15 focal species. The species initially selected to identify life history characteristics, juvenile habitat use of estuaries, and threats to juvenile life stages in estuaries includes species of commercial, recreational and cultural importance among the three West Coast States:

- Dungeness crab (Cancer magister)
- Bay shrimp (Crangon franciscorum)
- Leopard shark (Triakis semifasciata)
- Bat ray (Myliobatis californica)
- Green sturgeon (Acipenser medirostris)
- Steelhead trout (Oncorhynchus mykiss)
- Coho salmon (Oncorhynchus kisutch)
- Chinook salmon (Oncorhynchus tshawytscha)
- California halibut (Paralichthys californicus)
- English sole (Parophrys vetulus)
- Starry flounder (Platichthys stellatus)
- Brown rockfish (Sebastes auriculatus)
- Staghorn sculpin (Leptocottus armatus) Shiner perch (Cymatogaster aggregate)
- Pacific herring (Clupea pallasi)



This list will be expanded to include more species in future phases of the assessment.

Figure 1. Maps showing the documented presence of Dungeness crab in Washington, Oregon, and California. Dungeness crab is one of the 15 focal species in the PMEP assessment. Similar maps were created for all 15 focal species as part of the State of the Knowledge report.

# **NCTIONS OF WEST COAST ESTUARIES**

#### Inventory and Classification of West Coast Estuaries

The Nature Conservancy, in partnership with the Central Coast Wetlands Group and IEc, developed an authoritative inventory and geo-database of estuaries in California, Oregon, and Washington. They:

- estuary geodatabase; and
- single classification scheme.

Coastal and Marine Ecological Classification Standard (CMECS) best met the criteria for an estuarine classification scheme that could be standardized across all three states.



Figure 2. The abundance and distribution of CMECS classes of 303 estuaries totaling 10,247 km<sup>2</sup> for Washington, Oregon, and California.



Compiled existing information and conducted outreach to develop a comprehensive inventory of all West Coast estuaries;

Compiled or constructed polygons of each estuary and developed an

Synthesized existing estuarine classifications that have been applied to West Coast estuaries, and reclassified all West Coast estuaries using a