



**CMECS** -- The Common Language for Marine Ecosystems

## Developing a National Marine Classification Standard

The Coastal and Marine Ecological Classification Standard (CMECS) is being developed as a national framework for organizing information about coasts and oceans and their living systems. The five components of the classification standard represent the different aspects of the seascape (water column, geform, surface geology, benthic biology, and sub-benthos), starting with the broadest systems (marine, estuarine, and lacustrine) and narrowing to the most detailed physical and biological elements associated with a specific habitat type.

Descriptive information, such as salinity, turbidity, and percent cover, can be added to the CMECS units through the use of “modifiers”. Mapping guidance and protocols, along with a dichotomous key, will be produced to support implementation of the standard.

The Federal Geographic Data Committee (FGDC) is in the process of adopting CMECS as a national standard and is soliciting input from the public. Feedback from a broad diversity of stakeholders is important to this process.

### CMECS Benefits

- Data collected by different sensors can be integrated into a single database.
- All of the physical, biological, and chemical forcing functions that collectively determine a habitat type can be captured.
- The system has the flexibility to accommodate current data acquisition technology.
- The structure allows new data to be added at any level.
- Users can access a wider array of data and develop status and trends analyses at the local, regional, and federal levels.
- CMECS incorporates water column habitats and associated land form features of the coastal and marine environment. This multi-component approach allows end-users to evaluate environmental drivers that influence species distributions and conditions independent of the observation process.

### How Can It Be Used?

CMECS provides a structure for developing and synthesizing data so that habitats can be identified, characterized, and mapped in a standard way across regional and national boundaries. CMECS will also support status and trend monitoring activities, policy development, restoration planning, and fisheries management. This proposed standard complements existing wetland and upland classification systems.

Nearly a decade of work has gone into developing CMECS. The National Oceanic and Atmospheric Administration, along with NatureServe, the U.S. Environmental Protection Agency, and the U.S. Geological Survey, have worked with hundreds of scientists and coastal managers to develop and test the standard. The testing process has included numerous projects in a variety of geographies.

### **Project Cooperators**

University of Rhode Island  
Massachusetts Division of Marine Fisheries  
South Florida Water Management District  
U.S. Army Corps of Engineers  
The Nature Conservancy  
Texas Parks and Wildlife Department  
Oregon Coastal Management Program

Virginia Institute of Marine Science  
University of Southern Mississippi  
National Park Service  
Florida International University  
University of Miami  
U.S. Fish and Wildlife Service

### **How You Can Get Involved**

- **Apply the standard** to your research or environmental assessments when habitat classification is required.
- **Provide feedback to** [nos.csc.cmecs\\_IG@noaa.gov](mailto:nos.csc.cmecs_IG@noaa.gov), even if you review only the sections related to your specific interest. The deadline for public comments set by the FGDC, the group that will make the final decision to endorse the standard, is December 13, 2010; although additional input can be provided through mid-2011.
- **Inform your peers** about the standard to ensure that the needs of all stakeholders are reflected in the final version and that it is useful to living marine resource managers and research communities.

**For more information, please visit:** [www.csc.noaa.gov/benthic/cmecs](http://www.csc.noaa.gov/benthic/cmecs)  
**or contact:** [nos.csc.cmecs\\_IG@noaa.gov](mailto:nos.csc.cmecs_IG@noaa.gov)

