

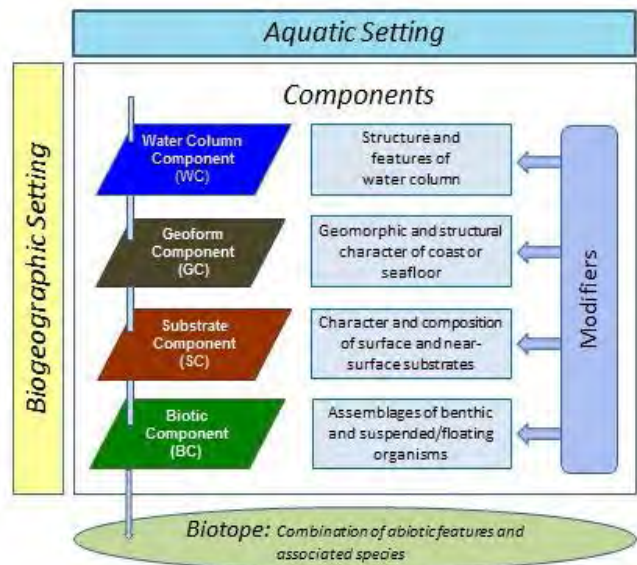
# Coastal and Marine Ecological Classification Standard (CMECS)

The Coastal and Marine Ecological Classification Standard (CMECS) provides a national framework for organizing information about coasts and oceans and their living systems. The six elements of the standard represent the different aspects of the seascape (water column, geform, substrate, biotic communities, biogeographic setting, and aquatic setting), starting with the broadest systems (marine, estuarine, and lacustrine) and narrowing to the most detailed physical and biological features associated with a specific habitat type (biotic community).

Descriptive information such as salinity, turbidity, and percent cover are included in CMECS as modifiers. Mapping guidance and protocols, along with dichotomous keys, will be produced to support implementation of the standard.

The Federal Geographic Data Committee (FGDC) has endorsed CMECS as a national standard. Their endorsement followed a long period of public review that included input from a wide variety of stakeholders. As an approved Federal Geographic Data Committee (FGDC) standard, CMECS would be required if federal funds are used for the project.

More than 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

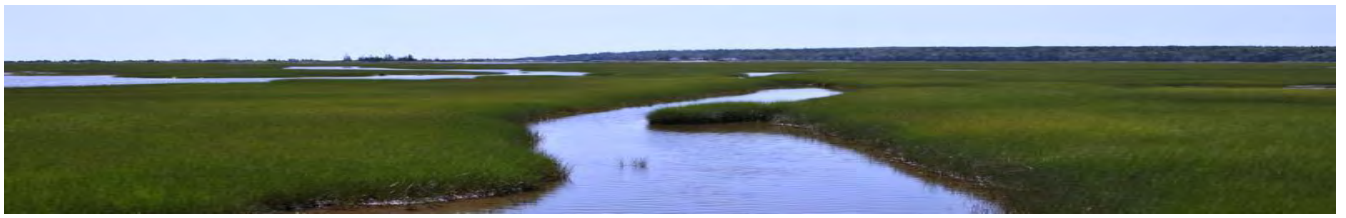


CMECS Classification Structure

## How Can It Be Used?

- Ecosystem inventory and mapping
- Coastal and marine spatial planning
- Marine Protected Area selection, evaluation, and assessment
- Resource management and monitoring
- Conservation status assessment
- Habitat modeling
- Ecosystem services evaluation

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



## CMECS Benefits

- Data collected by different sensors and methods can be integrated into a single database.
- All the physical, biological, and chemical-forcing functions that collectively determine a habitat type can be captured.
- The system has the flexibility to accommodate new units as additional information becomes available.
- CMECS incorporates water column habitats and associated land forms 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.

## Applying the CMECS Standard

- **Use the CMECS standard** at the outset of a project to allow integration of data from multiple sources.
- **Cross-walk** your existing data into the CMECS framework to allow broader application of your results.
- **Propose new units** based on new data for incorporation into future revisions of the standard.
- **Share your experiences** in applying the standard with others.

## For more information:

Visit <https://iocm.noaa.gov/cmecs/index.html>

OR

Contact the CMECS development team at: [ocm.cmecs-ig@noaa.gov](mailto:ocm.cmecs-ig@noaa.gov)

