

Interim report

Advancement of the Coastal and Marine Ecological Classification Standard to Final Draft:

Agreement Number: G11AC20044

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Executive Summary

This project is advancing the Coastal and Marine Ecological Classification Standard (CMECS) from the review draft stage to the final draft stage of the FGDC Standard Approval Process. NatureServe is coordinating the process by working with NOAA, and members of the CMECS Implementation Group (IG) and the CMECS Working Group (WG) to address public and peer review comments, solve technical issues that arise from the comments, and revise the CMECS standard to reflect the suggestions made during the public review process. During the first six months of this project NatureServe, the IG, and the WG have revised the CMECS structure and content to incorporate reviewer comments (over 700 suggestions from more than 31 agencies/ individuals) into the Standard. To date, we have completed the revision of the CMECS framework and made all necessary changes and additions to the units in each of the five components. All changes reflect specific suggestions from reviewers. We have addressed all reviewer comments, but will formally document our responses after the re-writing stage is complete. A completed standard is expected in December, 2011, and full documentation of responses to reviewer comments will be completed by the end of the project. We have initiated the rewriting of the standard and are currently scheduled to have draft chapters ready for WG review by the beginning of October. As part of our outreach strategy we have given presentations on CMECS at Coastal GeoTools Conference (March 2011), Coastal Zone Conference (July, 2011), and EMECS conference (August, 2011).

Project Narrative

The project is on track according to the schedule outlined in the proposal. The Implementation Group took the lead in on working with issue teams to develop proposals in response to comments. Issue teams addressed each of the components separately. Throughout the process, we convened regular WG meetings to allow for approval of all proposals. We also held a 5 day workshop called “CMECS Camp” (see below) to allow IG and WG members to work together on specific issues. The issue teams have now developed revised versions of the all five CMECS components (Biotic, Substrate, Geofom, Water Column, and Ecoregion). These teams have conducted their own research, consulted additional experts as needed, and considered the public comments in developing their latest versions. The following are the highlights for each component. All of these proposed changes have received vetting through the Implementation Group and Working Group. Minor adjustments are being followed through on.

Biotic Component (team members: Kathy Goodin, Mark Finkbeiner, Larry Handley, Giancarlo Cicchetti; additional experts consulted: Tom Hourigan, Dan Dorfman, Kathleen Sullivan-Sealy, David Palandro)

- Corals have been reorganized and updated to reflect deep-water/cold-water reef units.
- All National Vegetation Classification units have been incorporated for vegetated classes at the biotope level.
- Algae have been organized according to growth morphology.
- Faunal beds have been organized around either soft or hard bottom communities

Substrate Component (team members : Giancarlo Cicchetti, Mark Finkbeiner, Kathy Goodin)

- The Wentworth size system has been incorporated into this component.

- The Folk system (a follow-on to Wentworth) is being used to describe sediment mixes.
- Substrates have been organized according to their origin: Biogenic, Geologic, and Anthropogenic.

Geoform Component (team members: Mark Finkbeiner, Kathy Goodin, John King, Emily Shumchenia, Guy Cochran, Larry Handley; additional expert consulted: Phil Schoenberger)

- New units proposed during the public review have been incorporated.
- A spatial scale framework has been established
- Deep-Water/Cold-Water coral morphologies have been added to existing coral forms.
- Additional units from the west coast and from geological dictionaries have been incorporated.
- Geoforms have been organized according to their origin: Biogenic, Geologic, and Anthropogenic.
- Physiographic provinces have been removed in lieu of having an Ecoregional Component as a major organizer.

Water Column Component (team members: Chris Madden, Garry Mayer, Becky Allee, Sandra Upchurch, Mike Rasser, Kathryn Ford, Ed Rutheford, Jan Kurtz)

- An organizing framework for this component and subsequent units has been developed. Vertical structure, physico-chemical character, and hydrological feature are now captured in this component.
- Hydroforms were reorganized based on feedback from the WCC workshop hosted by NOAA that was held in January, 2011.

Ecoregional Component (Kathy Goodin, additional experts consulted: Mark Spalding, Helen Fox)

- The Marine Ecosystems of the World system was adopted to form this component because of its global focus.

Sub-Benthic Component (eliminated)

- This component has been eliminated from CMECS and users will be encouraged to use existing FGDC soils standard and USDA emerging subaqueous soils standard if they have the need to classify subaqueous soils.

Workshops:

We held one workshop to further our work on the Standard.

- a) June 6-10
- b) CMECS Camp – hosted by NatureServe
- c) NatureServe Headquarters, Arlington VA
- d) CMECS Camp
- e) In-Person Attendees

NOAA: Becky Allee, Mark Finkbeiner, Garry Mayer
NatureServe: Kathy Goodin, Chris Madden

USGS: Larry Handley
University of Rhode Island: John King, Emily Shumchenia
US Army Corps of Engineers: Jan Kurtz

Phone-WebEx Attendees

USGS: Guy Cochran
EPA: Giancarlo Cicchetti
NOAA: Ed Rutheford
BOEMRE: Mike Rasser
University of Southern Mississippi: Steve Lohrenz

f) 14 attendees

g) The workshop resulted in major revisions to the framework and all units. We completed responses to all comments from the Geofom and Water Column component, and made significant headway in responding to comments regarding thresholds for the Biotic Classes and Subclasses, and Water Column Component. We endorsed the decision to use the Wentworth and Folk classifications as the basis for the Substrate Component and decided to eliminate the Sub-benthic component from CMECS. Participants commented that this was perhaps one of the most productive workshops of their careers!

The only major challenge of this process has been to coordinate the work of a group of volunteers. CMECS represents only a small portion of most IG member's job duties their ability focus their attention fully on CMECS has been limited. Likewise the WG is an all volunteer group and it has been difficult to get sustained focus from all individuals on the WG. Current government travel restrictions have also limited our ability to have a follow-on meeting to CMECS camp. The process would go faster if we had the ability to direct and pay for the time of the participants and to meet face-to-face more frequently. We felt very lucky to be able to have CMECS camp, as it was a very efficient and productive event. That said, the project is progressing at the pace we indicated in the proposal.

Next Steps:

We have just begun to focus on the re-writing of the Standards document and will be in this phase of the project for the months of September and October. We have assigned individuals from the IG to serve as "Chapter Editors" for each of the chapters of the document. They will coordinate the writing and review of their respective chapters. We have created a SharePoint site to facilitate the writing and review phases. Once we have a near-final document completed, we will vet it through the WG for a final review. We have arranged for a professional editor to review the completed document. Once the writing has been completed, we will formally document our responses to individual comments. This process has been initiated in the form of notes on each of our comment spreadsheets, but we will complete formal documentation once the writing of the Standard is complete to account for any last minute changes that occur during the writing process.