

CMECS keywords for CMGP metadata records

The Coastal and Marine Ecological Classification Standard (CMECS) provides useful place keywords, stratum keywords, and theme keywords for CSDGM (“FGDC”) metadata records. The CMECS hierarchy of terms is available here:

- The CMECS standard from FGDC: https://www.fgdc.gov/standards/projects/cmecs-folder/CMECS_Version_06-2012_FINAL.pdf
- The CMECS website: <https://www.cmecscatalog.org/>
- The USGS controlled vocabulary server: <https://www2.usgs.gov/science/about/thesaurus-full.php?thcode=62>

Choosing keywords for CSDGM metadata records

1. CMECS keywords are **not** appropriate for the following types of data:
 - a. Subsurface geology data, for example seismic profiles.
 - b. Inland data. However, for coastal data, consider the Geoform Level 1 term, *Shore Complex*, defined as “generally a narrow, elongate area that parallels a coastline – commonly cutting across diverse inland landforms. Shore complexes are dominated by landforms derived from active coastal processes that give rise to beach ridges, washover fans, beaches, dunes, wave-cut platforms, barrier islands, cliffs, etc.”
2. Try to ensure that all metadata records for data collected in the ocean, large lakes, and tidally influenced estuaries and rivers have context keywords:
 - a. Place keywords: use *Place_Keyword_Thesaurus: Coastal and Marine Ecological Classification Standard (CMECS)* in your metadata record. If your study area lies [at depths of 200m or less] within the United States EEZ, choose place keywords from *Biogeographic Setting*. This should be possible using maps. (If your study area does **not** lie [at depths of 200m or less] within the United States EEZ, skip this step.)
 - b. Stratum keywords: use *Stratum_Keyword_Thesaurus: Coastal and Marine Ecological Classification Standard (CMECS)* in your metadata record. Choose stratum keywords from:
 - i. *Water Column > Layer*
 - ii. The layers listed in *Water Column > Biogeochemical Feature*
 - iii. *Substrate* (top-level term only; use selected child terms as theme keywords: see item 3, below)
 - c. Theme keywords: use *Theme_Keyword_Thesaurus: Coastal and Marine Ecological Classification Standard (CMECS)* in your metadata record. Choose theme keywords from:
 - i. *Aquatic Setting*
 - ii. *Geoform > Tectonic Setting*
 - iii. *Geoform > Physiographic Setting*

3. Add additional theme keywords that describe the type of measurements or interpretations contained in the data, for example, the most specific applicable term in one (or more) of these groups:
 - a. *Substrate > Geologic Substrate > either Rock Substrate or Unconsolidated Mineral Substrate*
 - b. *Substrate > Biogenic Substrate*
 - c. *Water Column > Salinity*
 - d. *Water Column > Temperature*
4. Add additional theme keywords that describe ecosystem elements that are key results from the measurements or interpretations, choosing from among the following components:
 - a. *Biotic*
 - b. *Geoform*
 - c. *Substrate > Biogenic Substrate*
 - d. *Water Column > Biogeochemical Feature*
 - e. *Water Column > Hydroform*

Strategy for “old” metadata records

1. Start by using the data catalog geographic search function to identify groups that can have the same *Biogeographic Setting* added.
2. Go through the records already containing DCMF keywords to identify groups of records that can have the same CMECS keywords added.
3. Get advice from Alan. [One tip: browse the CMGDS WAF (<https://cmgds.marine.usgs.gov/metadata/>) for subfolders containing groups of related metadata records.]

This is a recommended procedure for metadata authors and metadata collection managers in the USGS Coastal and Marine Geology Program.

We intend to modify this guidance as problems and opportunities are identified. Please send your suggestions and questions to Fran Lightsom, flightsom@usgs.gov.

This version was drafted on March 9, 2018.