# CMECS Aquatic Setting (AS) Changes

* Added column “Setting”; populated with “Aquatic Setting” for all units
* Added Aquatic Setting unit at the uppermost level with definition, Component Code, and Unit Code
* Corrected name of Oceanic Subsystem unit to Marine Oceanic Subsystem; corrected definition (previous version mistakenly used the definition for Marine System unit).
* Appended each unit name (term) with applicable type of setting (e.g. System, Subsystem, Tidal Zone). **See description of unit status for more information**
* Added column “Literature Cited”; populated with references for literature cited in unit definitions where applicable, sourced from FGDC-STD-018-2012 Section 14- Literature Cited, p. 245
* Added column “Unit Type”; populated with type of unit for each unit
* Added column “CMECS Version”; populated with “1.1.0” for each unit
* Added column “Unit Status”; populated with unit status for each unit. **See description of unit status for more information**
* Added column “Type of Change”; populated with change type for each unit where applicable. **See description of unit status for more information**
* Added column “Term ID”; populated with individual identifier codes for each unit
* Added column “Unit IRI”; populated with individual Internationalized Resource Identifiers for each unit. See <https://en.wikipedia.org/wiki/Internationalized_Resource_Identifier> for more information.

# CMECS Biogeographic Setting (BS) Changes

* Added column “Setting”; populated with “Biogeographic Setting” for all units
* Added row populated with “Biogeographic Setting” unit term and attributes at the uppermost level
* Appended each unit name (term) with applicable type of setting (e.g. System, Subsystem, Tidal Zone). **See description of unit status for more information**
* Deprecated unit Ecoregion: Crustacean Meroplankton (E3.1.3), which was an erroneous entry from the previous CMECS Catalog database
* Added column “Literature Cited”; populated with references for literature cited in unit definitions where applicable, sourced from FGDC-STD-018-2012 Section 14- Literature Cited, p. 245
* Added column “Unit Type”; populated with type of unit for each unit
* Added column “CMECS Version”; populated with “1.1.0” for each unit
* Added column “Unit Status”; populated with unit status for each unit. **See description of unit status for more information**
* Added column “Type of Change”; populated with change type for each unit where applicable. **See description of unit status for more information**
* Added column “Term ID”; populated with individual identifier codes for each unit
* Added column “Unit IRI”; populated with individual Internationalized Resource Identifiers for each unit. See <https://en.wikipedia.org/wiki/Internationalized_Resource_Identifier> for more information.

# CMECS Biotic Component (BC) Changes

* Added column “Component”; populated with unit term “Biotic Component” for all units
* Added “Biotic Component” unit with all related attributes at the uppermost level
* Added column “Literature Cited”; populated with references for literature cited in unit definitions where applicable, sourced from FGDC-STD-018-2012 Section 14- Literature Cited, p. 245
* Added unit B TBD Biotic Component Benthic/Attached Biota Emergent Wetland Emergent Tidal Marsh Freshwater Tidal Marsh <Acorus calamus> Tidal Herbaceous Vegetation. Note: an original unit, since it was listed in the fgdc doc but omitted from previous database
* Corrected definition for Subclass: Worm Meroplankton unit (previous version mistakenly used the definition for Subclass: Worm Holoplankton unit)
* Added column “Unit Type”; populated with type of unit for each unit
* Added column “CMECS Version”; populated with “1.1.0” for each unit
* Added column “Unit Status”; populated with unit status for each unit. **See description of unit status for more information**
* Added column “Type of Change”; no changes were made, so column is unpopulated. **See description of unit status for more information**
* Added column “Term ID”; populated with individual identifier codes for each unit
* Added column “Unit IRI”; populated with individual Internationalized Resource Identifiers for each unit. See <https://en.wikipedia.org/wiki/Internationalized_Resource_Identifier> for more information.

# CMECS Geoform Component (GC) Changes

* Added column “Component”; populated with unit term “Geoform Component” for all units
* Added row populated with “Geoform Component” unit term and all related attributes at the uppermost level
* Added row populated with “Tectonic Setting” unit term and attributes
* Added row populated with “Physiographic Setting” unit term and attributes
* Moved all Unit Codes to single column and deleted Physiographic Setting and Geoform Unit Code columns
* Moved all Geoform Component Subcomponents (Tectonic Setting, Physiographic Setting, Level 1 Geoform, Level 2 Geoform) to a single “Subcomponent” column
* Added Geoform Origin term (ex., Geologic Origin) to Geoform Subcomponent term (ex., Geologic Geoform (Level 1); deleted “Geologic Origin” column
* Corrected definition for Anthropogenic Geoform: Dredge Deposit unit (previous version mistakenly used the definition for Anthropogenic Geoform Type: Dredge Deposit Shoal unit)
* Added column “Literature Cited”; populated with references for literature cited in unit definitions where applicable, sourced from FGDC-STD-018-2012 Section 14- Literature Cited, p. 245
* Added column “Unit Type”; populated with type of unit for each unit
* Added column “CMECS Version”; populated with “1.1.0” for each unit
* Added column “Unit Status”; populated with unit status for each unit. **See description of unit status for more information**
* Added column for “Type of Change” attribute (**see description of unit status for more information)**; at this time, there are no values to populate for the GC.
* Added column “Term ID”; populated with individual identifier codes for each unit
* Added column “Unit IRI”; populated with individual Internationalized Resource Identifiers for each unit. See <https://en.wikipedia.org/wiki/Internationalized_Resource_Identifier> for more information.

# CMECS Substrate Component (SC) Changes

* Added column “Component”; populated with unit term “Substrate Component” for all units
* Added row populated with “Substrate Component” unit term and all related attributes at the uppermost level.
* INSERT CHANGES TO UNITS HERE
* Most Unit Codes have been deleted; new codes are TBD and will be added later.
* Added column “Literature Cited”; populated with references for literature cited in unit definitions where applicable, sourced from FGDC-STD-018-2012 Section 14- Literature Cited, p. 245
* Added column “Unit Type”; populated with type of unit for each unit
* Added column “CMECS Version”; populated with “1.1.0” for each unit
* Added column “Unit Status”; populated with unit status for each unit. **See description of unit status for more information**
* Added column for “Type of Change” attribute (**see description of unit status for more information)**.
* Added columns for “Implementation Guidance” attribute; populated with guidance statements for each unit where applicable.
* Added column for “Notes” attribute; populated with notes providing context and additional information about units where applicable.
* Added column “Term ID”; populated with individual identifier codes for each unit
* Added column “Unit IRI”; populated with individual Internationalized Resource Identifiers for each unit. See <https://en.wikipedia.org/wiki/Internationalized_Resource_Identifier> for more information.

# CMECS Water Column Component (WC) Changes

* Added column “Component”; populated with unit term “Water Column Component” Component” for all units
* Added row populated with “Water Column Component” unit term and all related attributes at the uppermost level.
* Added column “Subcomponent”; populated with “Water Column Layer”, “Salinity”, “Temperature”, Hydroform”, and “Biogeochemical Feature” subcomponent unit terms for each relevant unit
* Added rows populated with “Water Column Layer”, “Salinity”, “Temperature”, Hydroform”, and “Biogeochemical Feature” subcomponent unit terms and attributes.
* Moved all Unit Codes to single column and deleted individual columns for the subcomponent unit codes
* Added column “Literature Cited”; populated with references for literature cited in unit definitions where applicable, sourced from FGDC-STD-018-2012 Section 14- Literature Cited, p. 245
* Added column “Unit Type”; populated with type of unit for each unit
* Added column “CMECS Version”; populated with “1.1.0” for each unit
* Added column “Unit Status”; populated with unit status for each unit. **See description of unit status for more information**
* Added column for “Type of Change” attribute (**see description of unit status for more information)**; at this time, there are no values to populate for the BC.
* Added column “Term ID”; populated with individual identifier codes for each unit
* Added column “Unit IRI”; populated with individual Internationalized Resource Identifiers for each unit. See <https://en.wikipedia.org/wiki/Internationalized_Resource_Identifier> for more information.
* Added rows populated with unit terms and attributes for Marine Offshore Surface Layer, Marine Offshore Upper Water Column, Marine Offshore Pycnocline, Marine Offshore Lower Water Column units that were missing from former database

# CMECS Modifier Changes

* Added rows for Modifer Types and Modifiers as needed and populated with unit terms and all related attributes.
  + Anthropogenic Modifiers
  + Anthropogenic Impact
  + Biogeographic Modifiers
  + Primary Water Source
  + Biological Modifiers
  + Associated Taxa
  + Community Successional Stage
  + Invertebrate Community Organism Size
  + Phytoplankton Productivity
  + Macrovegetation Productivity
  + Temporal Modifiers
  + Temporal Persistence
  + Physical Modifiers
  + Energy Direction
  + Energy Intensity
  + Energy Type
* Added “Constructed” unit to Anthropogenic Impact modifier
* Added unit “Porous” to Substrate Descriptor modifier
* Added Modifier: Mineral Precipitate with units: Crust, Nodules, Patina.
* Added column “Literature Cited”; populated with references for literature cited in unit definitions where applicable, sourced from FGDC-STD-018-2012 Section 14- Literature Cited, p. 245
* Added column “Unit Type”; populated with type of unit for each unit
* Added column “CMECS Version”; populated with “1.1.0” for each unit
* Added column “Unit Status”; populated with unit status for each unit. **See description of unit status for more information**
* Added column for “Type of Change” attribute (**see description of unit status for more information)**; at this time, there are no values to populate for the BC.
* Added column “Term ID”; populated with individual identifier codes for each unit
* Added column “Unit IRI”; populated with individual Internationalized Resource Identifiers for each unit. See <https://en.wikipedia.org/wiki/Internationalized_Resource_Identifier> for more information.
* Added columns for “Implementation Guidance” attribute; populated with guidance statements for each unit where applicable.