

2012 CMECS

Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
Geologic Substrate	Rock Substrate	Bedrock		
		Megaclast		
	Unconsolidated Mineral Substrate	Coarse Unconsolidated Substrate	Gravel	Boulder
				Cobble
				Pebble
				Granule
			Gravel Mixes	Sandy Gravel
				Muddy Sandy Gravel
				Muddy Gravel
				Gravelly Sand
		Fine Unconsolidated Substrate	Gravelly	Gravelly Muddy Sand
				Gravelly Mud
				Slightly Gravelly Sand
				Slightly Gravelly Muddy Sand
			Slightly Gravelly	Slightly Gravelly Sandy Mud
				Slightly Gravelly Mud
			Sand	Very Coarse Sand
				Coarse Sand
				Medium Sand
				Fine Sand
			Muddy Sand	Very Fine Sand
				Silty Sand
				Silty-Clayey Sand
				Clayey Sand
		Mud	Sandy Mud	Sandy Silt
				Sandy Silt-Clay
				Sandy Clay
				Silt
				Silt-Clay
				Clay

Biogenic Substrate	Algal Substrate	Algal Sand	Holmdeo Sand	
		Rhodolith Substrate	Rhodolith Rubble	
			Rhodolith Hash	
			Rhodolith Sand	
	Coral Substrate	Coral Reef Substrate		
		Coral Rubble		
		Coral Hash		
		Coral Sand		
	Organic Substrate	Organic Debris	Peat Debris	
			Woody Debris	Fine Woody Debris
		Organic Detritus		Coarse Woody Debris
			Organic Mud	Very Coarse Woody Debris
	Ooze Substrate	Carbonate Ooze	Coccolithophore Ooze	
			Foraminiferan Ooze	
			Pteropod Ooze	Globigerina Ooze
			Diatomaceous Ooze	
		Siliceous Ooze	Radiolarian Ooze	
			Clam Reef Substrate	Coquina Reef Substrate
			Crepidula Reef Substrate	
			Mussel Reef Substrate	
	Shell Substrate	Shell Reef Substrate	Oyster Reef Substrate	
			Clam Rubble	Coquina Rubble
			Crepidula Rubble	
			Mussel Rubble	
		Shell Rubble	Oyster Rubble	
			Clam Hash	Coquina Hash
			Crepidula Hash	
			Mussel Hash	
		Shell Hash	Oyster Hash	
			Clam Sand	Coquina Sand
			Sabellariid Reef Substrate	
			Sabellariid Rubble	
	Worm Substrate	Sabellariid Substrate	Sabellariid Hash	
			Serpulid Reef Substrate	
		Serpulid Substrate	Serpulid Rubble	
			Serpulid Hash	

2023 Proposed CMECS

Substrate Origin	Substrate Class	Substrate Subclass	Substrate Group	Substrate Subgroup
Geologic Substrate	Consolidated Mineral Substrate	Bedrock		
		Megaclast		
	Coarse Unconsolidated Mineral Substrate	Tar		
		Gravel Substrate	Very Coarse Gravel	Boulder
				Cobble
			Moderately Coarse Gravel	Pebble
				Granule
		Mixed Gravels	Gravel Mixes	Sandy Gravel
				Muddy Sandy Gravel
			Gravelly Mixes	Muddy Gravel
				Gravelly Sand
	Fine Unconsolidated Mineral Substrate	Trace Gravels	Sandy Mixes with Trace Gravel	Gravelly Muddy Sand
				Gravelly Mud
			Muddy Mixes with Trace Gravel	Slightly Gravelly Sand
				Slightly Gravelly Muddy Sand
		Sandy Substrate		Slightly Gravelly Sandy Mud
				Slightly Gravelly Mud
			Sand	Very Coarse Sand
				Coarse Sand
	Muddy Substrate	Muddy Sand		Medium Sand
				Fine Sand
				Very Fine Sand
				Silty Sand
		Sandy Mud		Silty-Clayey Sand
				Clayey Sand
				Sandy Silt
				Sandy Silt-Clay
		Mud		Sandy Clay
				Silt
				Silt-Clay
				Clay
Biogenic Substrate	Consolidated Biogenic Substrate	Reef Substrate	Coral Reef	Rhodolith Reef
			Algal Reef	Coquina Reef
			Shell Reef	Crepidula Reef
				Mussel Reef
				Oyster Reef
			Worm Reef	Sabellariid Reef
				Serpulid Reef
	Coarse Unconsolidated Biogenic Substrate	Biogenic Pavement	Corraline Pavement	
		Very Large Wood	Very Large Trunk or Root	Very Large Trunk
				Very Large Branch
		Algal Rubble	Very Large Wood Fragment	Very Large Wood Fragment
			Very Large Root or Root Network	Very Large Root or Root Network
				Rhodolith Rubble
	Biogenic Rubble	Shell Rubble	Coquina Rubble	
			Crepidula Rubble	
			Mussel Rubble	
			Oyster Rubble	
		Wood Rubble	Very Coarse Woody Debris	
			Coarse Woody Debris	
			Sabellariid Rubble	
			Serpulid Rubble	
		Algal Hash	Rhodolith Hash	
			Coral Hash	Acropora Hash
				Coquina Hash
			Shell Hash	Crepidula Hash
	Biogenic Hash	Shell Hash	Mussel Hash	
			Oyster Hash	
			Clam Hash	
			Coquina Hash	
		Fine Woody Debris	Sabellariid Hash	
			Serpulid Hash	
			Holmdeo Sand	
			Rhodolith Sand	
		Algal Sand	Diploria Sand	
			Coquina Sand	
			Mussel Sand	
			Oyster Sand	
	Fine Unconsolidated Biogenic Substrate	Biogenic Sand	Shell Sand	Sabellariid Sand
				Serpulid Sand
		Fine Organic Substrate	Peat	
			Organic Detritus	
			Organic Mud	
	Ooze Substrate	Carbonate Ooze	Coccolithophore Ooze	
			Foraminiferan Ooze	
			Pteropod Ooze	
			Diatomaceous Ooze	
		Siliceous Ooze	Radiolarian Ooze	

Anthropogenic Substrate	Anthropogenic Rock	Anthropogenic Rock Reef Substrate		
		Anthropogenic Rock Rubble		
		Anthropogenic Rock Hash		
		Anthropogenic Rock Sand		
	Anthropogenic Wood	Anthropogenic Wood Reef Substrate		
		Anthropogenic Wood Rubble		
		Anthropogenic Wood Hash		
		Anthropogenic Wood Sand		
	Construction Materials	Construction Reef		
		Construction Rubble		
		Construction Hash		
		Metal Reef Substrate		
	Metal	Metal Rubble		
		Metal Hash		
	Trash	Trash Rubble		
		Trash Bits		