

4 - Bedrock/Gravel - CC 1-23, 33 - SP 10 - Bedrock or Sediment - CC 34 - VP/P/SP 5 - Bedrock/Gravel - CC 1-23,33 - P/VP Tidal Lagoon 11 - Bedrock or Sediment - CC 35 - VP/P/SP CC Type

Rock Shore Types - characterized by a lack of clastic sediments such as gravel or sand.

Sediment Shore Types - have substrates that have little or no bedcrock cropping out 1 Rock Ramp, Wide
2 Rock Platform Wide
3 Rock Cliff Narrow
4 Rock Ramp, Narrow
5 Rock Platform Narrow 22 Gravel Beach
23 Gravel Flat or Fan
24 Sand and Gravel Flat or Fan, Wide
25 Sand and Gravel Beach
26 Sand and Gravel Flat or Fan N 26 Sand and Gravel Flat or Fan, Narrow
27 Sand Beach, Wide Rock and Sediment Shore Types - rock and pockets of clastic sediments 6 Ramp with Gravel Beach, Wide 7 Platform with Gravel Beach, Wide 29 Mud Flat
30 Sand Beach, Narrow
31 Estuaries
Man-Made Materials
32 Man-made, permeable
33 Man-made, impermeable
Current Dominated 8 Cliff with Gravel Beach 9 Ramp with Gravel Beach, Narrow
10 Platform with Gravel Beach, Narrow
11 Ramp with Sand and Gravel Beach, Wide
12 Platform with Sand and Gravel Beach, Wide 12 Platform with Sand and Gravel Beach, Wide
13 Cliff with Sand and Gravel Beach
14 Ramp with Sand and Gravel Beach, Narrow
15 Platform with Sand and Gravel Beach, Narrow Current Dominated 15 Platform with Sand and Gravel Beach, Narrow
16 Ramp with Sand Beach, Wide
17 Platform with Sand Beach, Wide
18 Cliff with Sand Beach
19 Ramp with Sand Beach, Narrow
20 Platform with Sand Beach, Narrow

3 - Bedrock/Boulder - CC 1-23, 32, 33 - SE Current Dominated

Semi-exposed, Immobile substrate Habitat Type, part of the definition of that class is a certain combination of the most likely biobands and indictor species present at a bedrock shoreline with no mobile sediment present.

How is Habitat Type determined? Each Habitat Type has typical biological features (including both an indicator species list and typical associated biobands). To determine the Habitat Type, the biomapper looks at the along-shore Units as designated and described by the physical mapper, and 1. □ records the observations of the biobands in the unit and looks for indicator species, 2. □ assigns a bio-(wave) exposure category,

4. □ assigns the Habitat Type that best describes the unit.

The Habitat Type is based on the whole unit and is similar to the physical mappers use of the 'Coastal Class' category, in that the detailed across-shore data are summarized into one attribute. The simplified category describes the features of the whole unit.

Habitat Type is a summary of the biophysical classification of the whole shore unit, based on: □the biobands observed, • □ the wave exposure as indicated by the bands, and • the substrate types in the unit.

3. □ reviews the physical mapped information, and

Legend Definitions CC - Coastal Classification number

E - Exposed - Very high wave exposure, open ocean swellsm usually fetches >500km

VE - Very Exposed - Extreme high wave exposure SE - Semi Exposed - High wave exposure, open shorelines, areas between fully exposed and more sheltered, usually fetches 50 to 500km P - Protected - Low wave expsoure, sheltered inlets, usually fetches less than 10km SP - Semi Protected - Moderate wave expsoure, partly sheltered, usually fetches 10-50km

VP - Very Protected - Very low wave exposure, fethces < 1km, sheltered anchorages at heads of bays and inletes

SUBSTRATE STABILITY	IMMOBILE SUBSTRATES				MOBILE OR PARTIALLY MOBILE SUBSTRATES				CURRENT- DOMI- NATED	TIDAL IAGOON
MAJOR SUBSTRATE	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/GRAVEL	SAND & GRAVEL	SAND & GRAVEL	SAND/MUD	SEDIMENT	BEDROCK OR SEDIMENT	BEDROCK OR SEDIMENT
COASTAL CLASSES	1-20	1-23, 32, 33	1-23, 33	1-23, 33	24 – 30, 32 no SAL band	24 – 30, 32 no SAL band	24 - 30, 31 has SAL band	24-30	34	35
EXPOSURE (EXP BIO)	Е	SE	SP	VP, P	SP	VP, P	VP, P, SP	SE, E	VP, P, SP	VP, P, SP
COMMUNITY CODE (HAB OBS)	2	3	4	5	6	7	8	9	10	11
upper	Verrucaria Balanus glandula	Verrucaria Enteromorpha Balanus glandula Fucus distichus	Verrucaria Enteromorpha Balanus glandula Pucus distichus	Verrucaria Enteromorpha Baianus giandula Fucus distichus	Verrucaria Enteromorpha Balanus glandula Fucus distichus	Verrucaria Enteromorpha Balanus glandula Fucus distichus	grasses & rushes Salicornia virginica Balanus glandula Fucus distichus	no visible macrobiota due to sediment mobility	tidal current dominated; may be a Protected wave exposure but shows an assemblage of	Balanus glandula Fucus distichus ponded water in lagoon creates
middle	Pollicipes polymerus Mytilus californianus Semibalanus carriosus	Mytilus californianus Semibalanus carriosus	Mytilus trossulus* Semibalanus carriosus Ulva/ Ulvaria spp.	Mytilus trossulus * Ulva/ Ulvaria spp.	Semibalanus carriosus Ulva/ Ulvaria spp.	Ulva/ Ulvaria spp.	Mytilus trossulus** Ulva/ Ulvaria			
mid/low	Alaria 'nana' morph	Hedophyllum sessile Phyllospadix scouleri	,			,			indicator species from higher wave exposures. Assemblage	narrow intertidal and a reduced biota in brackish water, may have
lower	Lessoniopsis littoralis Lithothamnion	Alaria 'marginata' morph Lithothamnion	Laminaria groenlandica Laminaria saccharina Alaria 'marginata' morph Lithothannion	Laminaria saccharina	Laminaria groenlandica Laminaria saccharina Alaria 'marginala' morph Lithothamnion	Laminaria saccharina			observed is 'anomalous' for the wave energy of the site.	associated current dominated at outflow
subtidal	Nereocystis luetkeana	Nereocystis luetkeana Macrocystis integrifolia	Nereocystis luetkeana Macrocystis integrifolia	Macrocystis integrifolia	Nereocystis luetkeana Macrocystis integrifolia	Macrocystis integrifolia				

Agarum spp.

Strongylocentrotus

franciscanus

Agarum spp.

Strongylocentrotus

franciscanus

Agarum spp.

Strongylocentrotus franciscanus

