

1 - Bedrock - CC 1-20 - VE

2 - Bedrock - CC 1-20 - E

3 - Bedrock/Boulder - CC 1-23, 32, 33 - SE Current Dominated 10 - Bedrock or Sediment - CC 34 - VP/P/SP 4 - Bedrock/Gravel - CC 1-23, 33 - SP 5 - Bedrock/Gravel - CC 1-23,33 - P/VP

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
Rock and Sediment Shore Types - rock and pockets of clastic sediments
6 Ramp with Gravel Reach Wide 21 Gravel Flat, Wide
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, Narrow 26 Sand and Gravel Flat or Fan, Narrow
27 Sand Beach, Wide 6 Ramp with Gravel Beach, Wide 6 Ramp with Gravel Beach, Wide
7 Platform with Gravel Beach, Wide
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
13 Cliff with Sand and Gravel Beach
14 Ramp with Sand and Gravel Beach, Narrow
15 Platform with Sand and Gravel Beach, Narrow 29 Mud Flat
30 Sand Beach, Narrow
31 Estuaries
Man-Made Materials
32 Man-made, permeable
33 Man-made, impermeable
Current Dominated 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

9 - Sediment - CC 21 - 30 - SE/E

Each Habitat Type has a definition that includes the typical substrate, wave exposure and biobands. For example, for the 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,
3. □ reviews the physical mapped information, and
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. 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 MÖBILE SUBSTRATES				CURREN DOMI- NATED
MAJOR SUBSTRATE	BEDROCK	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/GRAVEL	SAND & GRAVEL	SAND & GRAVEL	ESTUARY or SAND/MUD	SEDIMENT	BEDROC SEDIMI
COASTAL CLASSES	1-20	1-20	1-23, 32, 33	1-23, 33	1-23, 33	24, 25, 26, 32	24, 25, 26, 32	27, 28, 29, 30, 31	21-30	34
EXPOSURE (EXP BIO)	VE	Е	SE	SP	VP, P	SP	VP, P	VP, P, SP	SE, E	VP, P
(HAB_OBS)	1	2	3	4	5	6	7	8	9	10
иррег	Verrucaria	Verrucaria	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	grasses & rushes Salicornia virginica		
	Balanus glandula	Balamıs giandula	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balamus glandula Fucus distichus	Balanus glandula Fucus distichus		tidal curr dominate
middle	Pollicipes polymerus Mytilus californianus	Pollicipes polymerus Mytilus californianus	Mytilus californianus	Mytilus trossulus	Mytilus trossulus	Mytilus trossulus	Mytilus trossulus	Mytilus trossulus		be a prote wave exp but show
	[Semibalanus carriosus]	Semibalanus carriosus	Semibalanus carriosus	Semibalanus carriosus Ulva/ Ulvaria spp.	Ulva/ Ulvaria spp.	Semibalanus carriosus Ulva/ Ulvaria spp.	Ulva/Ulvaria spp.	Ulva/ Ulvaria	no visible intertidal macrobiota due to sediment mobility	assemblag indicators from high wave expo Assemblag observed i 'anomalou
mid/low	[Alaria 'nana' morph]	Alaria 'nana' morph	Halosaccion glandiforme Hedophyllum sessile Codium fragile Phyllospadix scouleri Egregia menziesii	Halosaccion glandiforme  Codium fragile	Halosaccion glandiforme	Halosaccion glandiforme Codium fragile	Halosaccion glandiforme			
lower	Lessoniopsis littoralis [Laminaria setchelli] lush foliose coralline reds: Bosstella/ Calliarthron/ Corallina	Lessoniopsis littoralis Laminaria setchelli foliose coralline reds	Laminaria setchelli Laminaria groenlandica diverse mixed red algae Alaria 'marginata' morph	Laminaria groenlandica Laminaria saccharina Alaria 'marginata' morph	Laminaria saccharina	Laminaria groenlandica Laminaria saccharina Alaria 'marginata' morph	Laminaria saccharina			the wave of the site
cubtidal	Lithothamnion	Lithothamnion	Lithothamnion	Lithothamnion		Lithothamnion Nereocystis luetkeana				
subtidal	Nereocystis luetkeana	Nereocystis iuetkeana	Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrolus franciscanus	Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus Zostera marina	Macrocystis integrifolia Agarum spp. Zostera marina	Nereocystis Iuelkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus Zostera marina	Macrocystis integrifolia Agarum spp. Zostera marina	Zostera marina		

