

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 7 Platform with Gravel Beach, Wide 8 Cliff with Gravel Beach, Narrow
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.

• the biobands observed, • □ the wave exposure as indicated by the bands, and • □ the substrate types in the unit.

Legend Definitions
CC - Coastal Classification number

Habitat Type is a summary of the biophysical classification of the whole shore unit, based on:

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

MAJOR SUBSTRATE	BEDROCK	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/GRAVEL	SAND & GRAVEL	SAND & GRAVEL	ESTUARY or SAND/MUD	SEDIMENT	BEDROCK (SEDIMEN
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	E	SE	SP	VP, P	SP	VP, P	VP, P, SP	SE, E	VP, P, S
(HAB_OBS)	1	2	3	4	5	6	7	8	9	10
upper	Verrucaria	Verrucaria	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	grasses & rushes Salicornia virginica		
	Balanus glandula	Balanus giandula	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus di stichus		tidal current dominated; n
middle	Pollicipes polymerus Mytilus californianus	Pollicipes polymerus Mytilus californianus	Mytilus californianus						no visible	be a protected wave exposure but shows an assemblage of indicator specie
	[Semi balanus carriosus]	Semibalanus carriosus	Semibalanus carriosus	Mytilus trossulus Semibalanus carriosus Ulva/ Ulvaria spp.	Mytilus trossulus Ulva/ Ulvaria spp.	Mytilus trossulus Semibalanus carriosus Ulva/ Ulvaria spp.	Mytilus trossulus Ulva/Ulvaria spp.	Mytilus trossulus Ulva/ Ulvaria		
mid/low	[Alaria 'nana' morph]	Alaria 'nana' morph	Halosaccion glandiforme Hedophyllum sessile	Halosaccion glandiforme	Halosaccion glandiforme	Halosaccion glandiforme	Halosaccion glandiforme		intertidal macrobiota due to	from higher wave expos
	глана таа шограу	Auria nana morph	Codium fragile Phyllospadix scouleri Egregia menziesii	Codium fragile		Codium fragile			sediment mobility	Assemblage observed is 'anomalous'
lower	Lessoniopsis littoralis [Laminaria setchelli] lush foliose coralline reds: Bossiella/ 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 energ of the site.
	Lithothannion	Lithothamnion	Lithothamnion	Lithothamnion		Lithothamnion				
subtidal	Nereocystis luetkeana	Nereocystis luetkeana	Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus	Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus	Macrocystis integrifolia Agarum spp.	Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus	Macrocystis integrifolia Agarum spp.			
				Zostera marina	Zostera marina	Zostera marina	Zostera marina	Zostera marina		l

