

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 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 28 Sand Flat 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

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

SUBSTRATE STABILITY	IMMOBILE SUBSTRATES					MOBILE OR PARTIALLY MOBILE SUBSTRATES				CURRENT- DOMI- NATED
MAJOR SUBSTRATE	BEDROCK	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/GRAVEL	SAND & GRAVEL	SAND & GRAVEL	ESTUARY or SAND/MUD	SEDIMENT	BEDROCK OR SEDIMENT
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, SP
COMMUNITY CODE (HAB_OBS)	1	2	3	4	5	6	7	8	9	10
upper	Verrucaria Balanus giandula	Verrucaria Balanus glandula	Verrucaria Enteromorpha Balanus glandula	Verrucaria Enteromorpha Balanus glandula	Verrucaria Enteromorpha Balanus glandula	Verrucaria Enteromorpha Balanus glandula	Verrucaria Enteromorpha Balanus glandula	grasses & rushes Salicornia virginica Balanus glandula		tidal current
middle	Pollicipes polymerus Mytilus californianus	Pollicipes polymerus Mytilus californianus	Fucus distichus Mytilus californianus	Fucus distichus Mytilus trossulus	Fucus distichus Mytilus trossulus	Fucus distichus Mytilus trossulus	Fucus distichus Mytilus trossulus	Fucus distichus Mytilus trossulus		dominated, may be a protected wave exposure but shows an assemblage of indicator species from higher wave exposures. Assemblage observed is 'anomalous' for the wave energy of the site.
	[Semibalanus carriosus]	Semibalanus carriosus	Semibalanus carriosus	Nymus trossuus Semibalanus carriosus Ulva/ Ulvaria spp.	Ulva/ Ulvaria spp.	Semibalanus carriosus Ulva/ Ulvaria spp.	Ulva/Ulvaria spp.	Myttius trossuius Ulva/ Ulvaria	no visible intertidal macrobiota due to sediment mobility	
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: 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			
subtidal	Lithothamnion Nereocystis luetkeana	Lithothamnion Nereocystis luetkeana	Lithothannion Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus	Lithothammion Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus Zostera marina	Macrocystis integrifolia Agarum spp. Zostera marina	Lithothamnion Nereocystis luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus Zosteru marina	Macrocystis integrifolia Agarum spp. Zostera marina	Zostera marina		

