

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 28 Sand Flat 7 Platform with Gravel Beach, Wide 8 Cliff 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, Wide 14 Ramp with Sand and Gravel Beach, Narrow 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 19 Ramp with Sand Beach, Narrow 20 Platform with Sand 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

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

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				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 middle	Verrucaria	Verrucaria	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	Verrucaria Enteromorpha	grasses & rushes Salicornia virginica	no visible intertidal macrobiota due to sediment mobility	tidal current dominated, may be a protected wave exposure but shows an assemblage of indicator specie from higher wave exposures Assemblage observed is 'anomalous' fo the wave energy of the site.
	Balanus glandula	Balamıs giandula	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus	Balanus glandula Fucus distichus		
	Pollicipes polymerus Mytilus californianus	Pollicipes polymerus Mytilus californianus	Mytilus californianus	Mytilus trossulus	Mytilus trossulus	Mytilus trossulus	Mytilus trossulus	Mytilus trossulus		
	[Semibalanus carriosus]	Semibalanus carriosus	Semibalanus carriosus	Semibalanus carriosus Ulva/ Ulvaria spp.	Ulva/ Ulvaria spp.	Semibalanus carriosus Ulva/ Ulvaria spp.	Ulva/Ulvaria spp.	Ulva/ Ulvaria		
mid/low	[Alaria 'nana' morph]	Alaria 'nana' morph	Halosaccion glandiforme Hedophyllum sessile Codium fragile Phyllospadix scouleri	Halosaccion glandiforme Codium fragile	Halosaccion glandiforme	Halosaccion glandiforme Codium fragile	Halosaccion glandiforme			
lower	Lessoniopsis littoralis [Laminaria setchelli] lush foliose coralline reds: Bossiella/ Calliarthron/Corallina Lithothannion	Lessoniopsis littoralis Laminaria setchelli foliose coralline reds Lithothamnion	Egregia menziesii Laminaria setchelli Laminaria groenlandica diverse mixed red algae Alaria 'marginata' morph Lithothanmion	Laminaria groenlandica Laminaria saccharina Alaria 'marginata' mosph Lithothannion	Laminaria saccharina	Laminaria groenlandica Laminaria saccharina Alaria 'marginata' morph Lithothamnion	Laminaria saccharina			
subtidal	Nereocystis Iuetkeana	Nereocystis luetkeana	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 luetkeana Macrocystis integrifolia Agarum spp. Strongylocentrotus franciscanus Zostera marina	Macrocystis integrifolia Agarum spp. Zostera marina	Zostera marina		

