



Legend	
	Unit Break Points
	Undefined
Immobile Substrates	
	1 - Bedrock - CC 1-20 - VE
	2 - Bedrock - CC 1-20 - E
	3 - Bedrock/Boulder - CC 1-23, 32, 33 - SE
	4 - Bedrock/Gravel - CC 1-23, 33 - SP
	5 - Bedrock/Gravel - CC 1-23, 33 - PNP
Mobile/Partially Mobile Substrates	
	6 - Sand & Gravel - CC 24-26, 32 - SP
	7 - Sand & Gravel - CC 24-26, 32 - VP/P
	8 - Estuary or Sand/Mud - CC 27-31 - VP/P/SP
	9 - Sediment - CC 21 - 30 - SE/E
Current Dominated	
	10 - Bedrock or Sediment - CC 34 - VP/P/SP
Tidal Lagoon	
	11 - Bedrock or Sediment - CC 35 - VP/P/SP
Data Source:	
Shoreline Type GeoBC Coastal Resource Shorezone Database, 2008 Base Information 1:20,000 GeoBC Terrain Resource Information Management (TRIM) Database	
1:20,000	
0 0.25 0.5 1 Kilometers	

## Shoreline Habitat

The Habitat Type provides a simplified picture of the "look" of the unit overall, based on the detailed biophysical attributes that have been mapped. The Habitat Type category is a summary of the observations of both the units biological and geomorphological features. 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 indicator 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

Wave Exposure  
E - Exposed - Very high wave exposure, open ocean swells 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 exposure, sheltered inlets, usually fetches less than 10km  
SP - Semi Protected - Moderate wave exposure, partly sheltered, usually fetches 10-50km  
VP - Very Protected - Very low wave exposure, fetches < 1km, sheltered anchorages at heads of bays and inlets

Table MIDCOAST and NORTH COAST project area which includes BIO-AREAS CC-35 and NC. The Species/wave exposure/substrate table for Habitat Classification (HAB-OBS), for the Mid-coast BC study area, from Johnstone Strait/Central Coast Mapping Regions 5, 6 and 7.

SUBSTRATE STABILITY MAJOR SUBSTRATE COASTAL CLASSES EXPOSURE (OBS-REQ) COMMUNITY CODE (HAB-OBS)	IMMOBILE SUBSTRATES				MOBILE OR PARTIALLY MOBILE SUBSTRATES				CURRENT-DOMINATED	TIDAL LAGOON
	BEDROCK	BEDROCK/BOULDER	BEDROCK/GRAVEL	BEDROCK/CLAY	SAND & GRAVEL	SAND & GRAVEL	SAND/MUD	SEDIMENT	BEDROCK OR SEDIMENT	BEDROCK OR SEDIMENT
1-20 E	1-23, 32, 33 SE	1-23, 33 SP	1-23, 33 VP, P	1-23, 33 VP, P	24-30, 32 no SAL band	24-30, 32 no SAL band	24-30, 32 has SAL band	24-30 VP, P, SP	34 VP, P, SP	35 VP, P, SP
2	3	4	5	6	7	8	9	10	11	
upper	<i>Verrucaria</i> <i>Balanus glandula</i> <i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Verrucaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Verrucaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Verrucaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Verrucaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>Verrucaria</i> <i>Enteromorpha</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	<i>grasses &amp; rushes</i> <i>Salicornia</i> <i>virginica</i> <i>Balanus glandula</i> <i>Fucus distichus</i>	no visible macrobenthos due to sediment mobility	tidal current dominated may be a Protected wave exposure but shows an assemblage of indicator species from higher wave exposures. Asemblage observed is "anomalous" for the wave energy of the site.	<i>Balanus glandula</i> <i>Fucus distichus</i>
middle	<i>Alaria 'vasei' morph</i>	<i>Hydrophyllum scutell</i>	<i>Phyllophora</i> <i>Enteromorpha</i> <i>Laminaria</i> <i>Enteromorpha</i> <i>Alaria 'marginalis' morph</i> <i>Lithothamnion</i>	<i>Alaria 'marginalis' morph</i> <i>Laminaria</i> <i>Enteromorpha</i> <i>Alaria 'marginalis' morph</i> <i>Lithothamnion</i>	<i>Alaria 'marginalis' morph</i> <i>Laminaria</i> <i>Enteromorpha</i> <i>Alaria 'marginalis' morph</i> <i>Lithothamnion</i>	<i>Alaria 'marginalis' morph</i> <i>Laminaria</i> <i>Enteromorpha</i> <i>Alaria 'marginalis' morph</i> <i>Lithothamnion</i>	<i>Alaria 'marginalis' morph</i> <i>Laminaria</i> <i>Enteromorpha</i> <i>Alaria 'marginalis' morph</i> <i>Lithothamnion</i>			
lower	<i>Leptocarpus</i> <i>Lithothamnion</i>	<i>Leptocarpus</i> <i>Lithothamnion</i>	<i>Leptocarpus</i> <i>Lithothamnion</i>	<i>Leptocarpus</i> <i>Lithothamnion</i>	<i>Leptocarpus</i> <i>Lithothamnion</i>	<i>Leptocarpus</i> <i>Lithothamnion</i>	<i>Leptocarpus</i> <i>Lithothamnion</i>			
subtidal	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> <i>Strongylocentrotus</i> <i>Fructicans</i> <i>Zostera marina</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> <i>Strongylocentrotus</i> <i>Fructicans</i> <i>Zostera marina</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> <i>Strongylocentrotus</i> <i>Fructicans</i> <i>Zostera marina</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> <i>Strongylocentrotus</i> <i>Fructicans</i> <i>Zostera marina</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> <i>Strongylocentrotus</i> <i>Fructicans</i> <i>Zostera marina</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> <i>Strongylocentrotus</i> <i>Fructicans</i> <i>Zostera marina</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> <i>Strongylocentrotus</i> <i>Fructicans</i> <i>Zostera marina</i>			

