



**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
- 11 - Bedrock or Sediment - CC 35 - VP/P/SP

**Tidal Lagoon**

- 12 - 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

N

W

S

E

CC	Type	CC	Type
1	Rock Shore Types - characterized by a lack of classic sediments such as gravel or sand.	21	Sediment Shore Types - have substrates that have little or no bedrock cropping out.
2	Rock Ramp, Wide	22	Gravel Flat, Wide
3	Rock Platform, Wide	23	Gravel Beach
4	Rock Cliff, Narrow	24	Gravel Flat or Fan
5	Rock Ramp, Narrow	25	Sand and Gravel Flat or Fan, Wide
6	Rock Platform, Narrow	26	Sand and Gravel Beach
7	Rock and Sediment Shore Types - rock and pockets of classic sediments	27	Sand and Gravel Flat or Fan, narrow
8	Shore with Gravel Beach, Wide	28	Sand Beach, Wide
9	Platform with Gravel Beach, Wide	29	Sand Flat
10	Cliff with Gravel Beach	30	Mud Flat
11	Shore with Gravel Beach, Narrow	31	Sand Beach, narrow
12	Platform with Gravel Beach, narrow	32	Cliff
13	Shore with Sand and Gravel Beach, Wide	33	Marine Materials
14	Platform with Sand and Gravel Beach, Wide	34	Man-made, permeable
15	Cliff with Sand and Gravel Beach	35	Man-made, impermeable
16	Shore with Sand and Gravel Beach, narrow	36	Current Dominated
17	Platform with Sand and Gravel Beach, narrow	37	Channel
18	Shore with Sand Beach, Wide	38	Tidal Lagoon
19	Cliff with Sand Beach		
20	Shore with Sand Beach, narrow		
21	Platform with Sand Beach, narrow		

## 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 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 EXPOSURE (OBS-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		
1-20	1-23, 32, 33	1-23, 33	1-23, 33	1-23, 33	24-30, 32	24-30, 31	24-30, 31	24-30	34	35
E	SE	SP	VP, P	VP, P	no SAL band	VP, P	VP, P, SP	SR, E	VP, P, SP	VP, P, SP
2	3	4	5	6	7	8	9	10	11	
upper	<i>Vernicaria</i>	<i>Vernicaria</i> <i>Enteromorpha</i>	<i>Vernicaria</i> <i>Enteromorpha</i>	<i>Vernicaria</i> <i>Enteromorpha</i>	<i>Vernicaria</i> <i>Enteromorpha</i>	<i>Vernicaria</i> <i>Enteromorpha</i>	<i>grasses &amp; rushes</i> <i>Salicornia</i> <i>virginica</i>			
	<i>Balanus glandula</i>	<i>Balanus glandula</i> <i>Pucus distichus</i>	<i>Balanus glandula</i> <i>Pucus distichus</i>	<i>Balanus glandula</i> <i>Pucus distichus</i>	<i>Balanus glandula</i> <i>Pucus distichus</i>	<i>Balanus glandula</i> <i>Pucus distichus</i>	<i>Balanus glandula</i> <i>Pucus distichus</i>			
middle	<i>Polysiphonia polymorpha</i> <i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Mytilus californianus</i> <i>Semibalanus cariosus</i>	<i>Mytilus trossulus</i> <i>Semibalanus cariosus</i> <i>Ulex / Ulexia</i> spp.	<i>Mytilus trossulus</i> <i>Semibalanus cariosus</i> <i>Ulex / Ulexia</i> spp.	<i>Semibalanus cariosus</i> <i>Ulex / Ulexia</i> spp.	<i>Semibalanus cariosus</i> <i>Ulex / Ulexia</i> spp.	<i>Mytilus trossulus</i> <i>Ulex / Ulexia</i>			
mid/low	<i>Alaria 'vomis' morph</i>	<i>Hydrophyllum scutell</i>								
lower	<i>Laminaria digitata</i>	<i>Phyllospora senilis</i>								
	<i>Laminaria digitata</i>	<i>Laminaria digitata</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.	<i>Laminaria digitata</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.	<i>Laminaria digitata</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.	<i>Laminaria digitata</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.	<i>Laminaria digitata</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.	<i>Laminaria digitata</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.			
	<i>Lobothamnion</i>	<i>Alaria 'marginata' morph</i> <i>Lobothamnion</i>	<i>Alaria 'marginata' morph</i> <i>Lobothamnion</i>	<i>Alaria 'marginata' morph</i> <i>Lobothamnion</i>	<i>Alaria 'marginata' morph</i> <i>Lobothamnion</i>	<i>Alaria 'marginata' morph</i> <i>Lobothamnion</i>	<i>Alaria 'marginata' morph</i> <i>Lobothamnion</i>			
subtidal	<i>Nereocystis lachnana</i>	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.	<i>Nereocystis lachnana</i> <i>Macrocystis integrifolia</i> <i>Agardh</i> spp.			
	<i>Strongylocentrotus</i> <i>franciscanus</i>	<i>Strongylocentrotus</i> <i>franciscanus</i>	<i>Strongylocentrotus</i> <i>franciscanus</i>	<i>Strongylocentrotus</i> <i>franciscanus</i>	<i>Strongylocentrotus</i> <i>franciscanus</i>	<i>Strongylocentrotus</i> <i>franciscanus</i>	<i>Strongylocentrotus</i> <i>franciscanus</i>			
	<i>Zostera marina</i>	<i>Zostera marina</i>	<i>Zostera marina</i>	<i>Zostera marina</i>	<i>Zostera marina</i>	<i>Zostera marina</i>	<i>Zostera marina</i>			

