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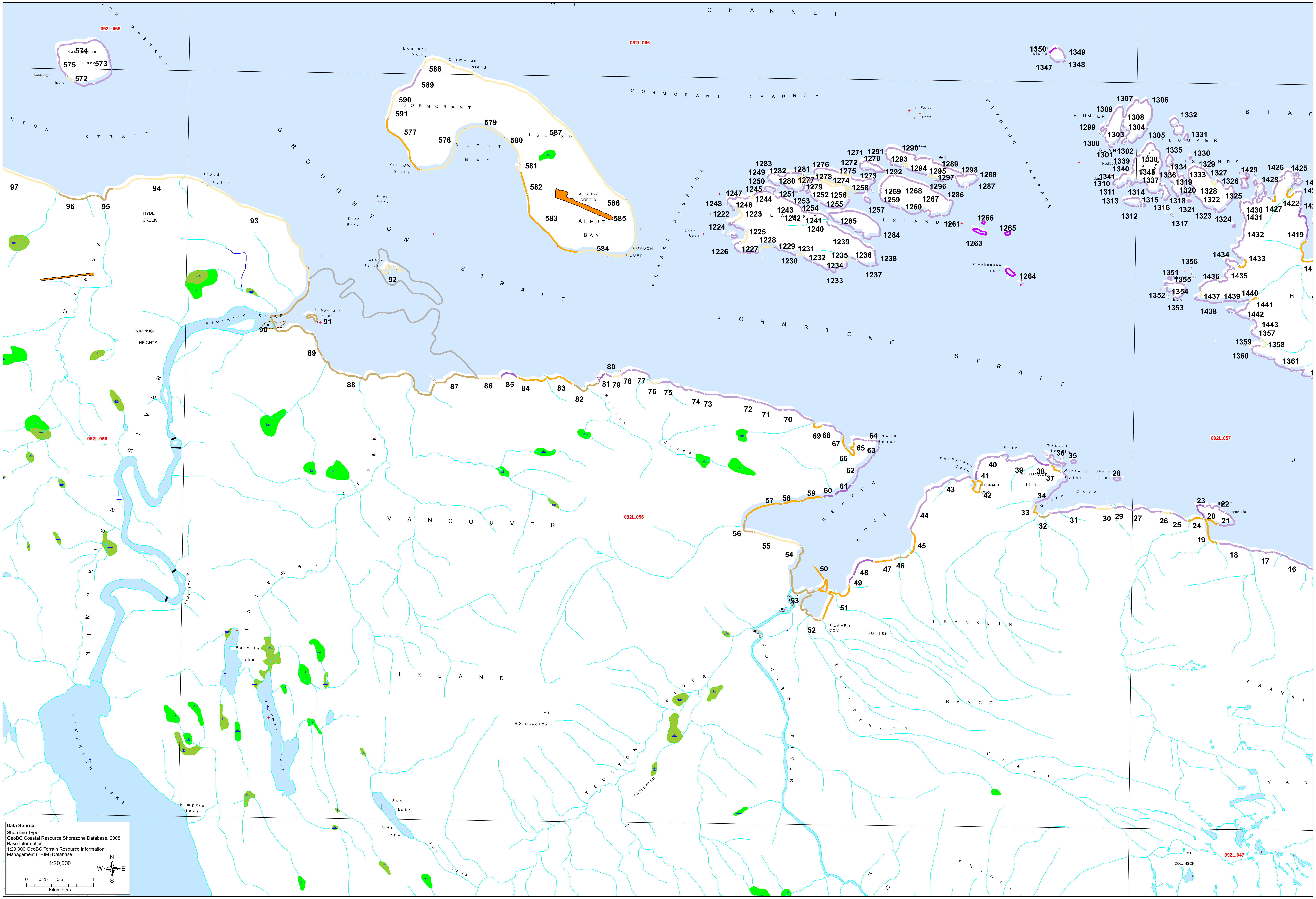

Legend

○ 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 - P/VP

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

CC	Type		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		21	Gravel Flat, Wide
2	Rock Platform Wide		22	Gravel Beach
3	Rock Cliff Narrow		23	Gravel Flat or Fan
4	Rock Ramp, Narrow		24	Sand and Gravel Flat or Fan, Wide
5	Rock Platform Narrow		25	Sand and Gravel Beach
Rock and Sediment Shore Types - rock and pockets of clastic sediments			26	Sand and Gravel Flat or Fan, Narrow
6	Ramp with Gravel Beach, Wide		27	Sand Beach, Wide
7	Platform with Gravel Beach, Wide		28	Sand Flat
8	Cliff with Gravel Beach		29	Mud Flat
9	Ramp with Gravel Beach, Narrow		30	Sand Beach, Narrow
10	Platform with Gravel Beach, Narrow		31	Estuaries
11	Ramp with Sand and Gravel Beach, Wide		**Man-Made Materials**	
12	Platform with Sand and Gravel Beach, Wide		32	Man-made, permeable
13	Cliff with Sand and Gravel Beach		33	Man-made, impermeable
14	Ramp with Sand and Gravel Beach, Narrow		**Current Dominated**	
15	Platform with Sand and Gravel Beach, Narrow		34	Channel
16	Ramp with Sand Beach, Wide		35	Tidal Lagoon
17	Platform with Sand Beach, Wide			
18	Cliff with Sand Beach			
19	Ramp with Sand Beach, Narrow			
20	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 observations of both the unit's biologial 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 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.

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 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

Table WCVI. GOES WITH BIO_AREAS WCVI, SCVI, WCVINorth, JdF
Habitat Classification for “Exposure Bio” (EXP_BIO) and “Habitat Observed” (HAB_OBS) based on visible macro-biota assemblages for the West Coast Vancouver Island bio-mapping.

MAJOR SUBSTRATE	BEDROCK/BOULDER	BEDROCK/BOULDER	BEDROCK/BOULDER	BEDROCK/BOULDER	SAND & GRAVEL	SAND & GRAVEL	SAND/MUD	SEDIMENT	BEDROCK OR SEDIMENT
COASTAL CLASSES	**1-20**	**1-20**	**1-23, 32, 33**	**1-23, 33**	**24, 25, 26, 32**	**24, 25, 26, 32**	**27, 28, 29, 30, 31**	**24 - 30**	
EXPOSURE (EXP_BIO)	E	SE	SP	P, VP	SP	P, VP	SP, P, VP	SE, E	VP, P, SP
HABITAT OBSERVED (HAB_OBS)	**2**	**3 ***	**4**	**5**	**6**	**7**	**8**	**9**	**10**
upper	*Verrucaria*	*Verrucaria*	*Verrucaria*	*Verrucaria*	*Verrucaria*	*Verrucaria*	**marsh grasses & rushes**	no visible macrobiota due to sediment mobility	tidal current dominated; may be a Protected wave exposure but shows an assemblage of indicator species from higher wave exposures.
		Enteromorpha	*Enteromorpha*	*Enteromorpha*	*Enteromorpha*	*Enteromorpha*			
							Salicornia virginica		
	Balanus glandula	*Balanus glandula*	*Balanus glandula*	*Balanus glandula*	*Balanus glandula*	*Balanus glandula*	*Balanus glandula*		
	Pelvetiopsis limitata	*Fucus distichus*	*Fucus distichus*	*Fucus distichus*	*Fucus distichus*	*Fucus distichus*	*Fucus distichus*		
middle									
	Semibalanus carriosus	*Semibalanus carriosus*	*Semibalanus carriosus*		*Semibalanus carriosus*				
	Policipes polymerus		*Mytilus trossulus*	*Mytilus trossulus*	*Mytilus trossulus*	*Mytilus trossulus*	*Mytilus trossulus*		
			Ulva/ Ulvaria spp.	*Ulva/ Ulvaria spp.*	*Ulva/ Ulvaria spp.*	*Ulva/ Ulvaria spp.*	*Ulva/ Ulvaria spp.*		
mid/low	***Mytilus californianus***	***Mytilus californianus***							
		Microcladia/Iridea type mixed reds	*Gigartina/Odonthalia* type mixed reds	*Gigartina/Odonthalia* type mixed reds	*Gigartina/Odonthalia* type mixed reds	*Gigartina/Odonthalia* type mixed reds			
	Postelsia palmaeformis								
		Hedophyllum sessile							
		Codium fragile	*Codium fragile*		*Codium fragile*				
lower	***Lessoniopsis littoralis***		*Laminaria saccharina*	***Laminaria saccharina***	*Laminaria saccharina*	*Laminaria saccharina*			
		Egregia menziesii							
	Laminaria setchellii	*Laminaria setchellii*							
		Laminaria groenlandica	*Laminaria groenlandica*		*Laminaria groenlandica*				
	Alaria nana.	*Alaria marginata.*	*Alaria marginata.*		*Alaria marginata.*				
		Eisenia arborea							
	Lithothamnion	*Lithothamnion*	*Lithothamnion*		*Lithothamnion*				
			Sargassum muticum		***Sargassum muticum***				
		Agarum sp	*Agarum sp*	*Agarum sp*	*Agarum sp*	*Agarum sp*			
		Phyllospadix scouleri							
subtidal		***Macrocystis integrifolia***	***Macrocystis integrifolia***	***Macrocystis integrifolia***	***Macrocystis integrifolia***	***Macrocystis integrifolia***			
	Nereocystis luetkeana	*Nereocystis luetkeana*	*Nereocystis luetkeana*		*Nereocystis luetkeana*				
		Strongylocentrotus franciscanus	***Strongylocentrotus franciscanus***		*Strongylocentrotus franciscanus*				
			Zostera marina	***Zostera marina***	***Zostera marina***	***Zostera marina***	***Zostera marina***