

# Central and Northern California Coastal Marine Habitats: Oil Residence and Biological Sensitivity Indices

## RELATIVE ABUNDANCE OF MAJOR MACROBIOTA\*

Taxa	A	B	C	D	E	F	G	H	I	J
<b>ROCKY INTERTIDAL MACROBIOTA</b>										
Acorn barnacles			0	0	0	0		0	0	0
Chlorophyta			0	0	0	0		0	0-C	0-C
Porphyra spp.					0-C	0-C			0-C	0
Pelvetiopsis limitata			0-C	0-C	0-C	C		C	C	C
Endocladia muricata			A	A	C-A	C		C	C	C
Pelvetia fastigiata										
Fucus distichus			0-C	0-C	0-C	0		0	C	0-C
Gigartina spp.			0-A	0-A	0-A	C		C	0-C	C
Pollicipes polymerus			0	0	0	0		C	0	C
Mytilus californianus			C-A	C-A	0	0		C	0	C
Corallina spp./Gigartina spp.			0-C	0-C	0-C	0-C		0-C	0-C	0-C
Postelsia palmaeformis			C-A	C-A	0-C	C		C	0-C	C
Halosaccion glandiforme			0	0	0	0		0	0	0
Iridaea spp.			C	C	C	C		C	C	C
Odonthalia spp./Rhodomela larix			0-C	0-C	0-C	0		0	0	0-C
Coralline algae			C-A	C-A	0	C		C	0	C
Phyllospadix spp.			C	C	C	0		0	C	C
Alaria marginata			0-C	0-C	0-C	C		C	C	C
Egregia menziesii			C	C	C	C		C	C	C
Laminaria spp.			C	C	C	C		C	C	C
Lessoniopsis littoralis			0-C	0-C	0-C	C		C	0	C
<b>OTHER MACROBIOTA</b>										
<b>Kelp beds:</b>										
Macrocystis spp.										
Nereocystis luetkeana								C	C	C
<b>Marine mammals:</b>										
Elephant seal										
Harbor seal				0-C	0-C				0	0-C
Steller sea lion				0	0				0-A	
California sea lion	0			0-C	0-A				0-A	
<b>Seabird nesting colonies:</b>										
Fork-tailed storm petrel					C				0	0
Leach's storm petrel					0				0	0-A
Ashy storm petrel										
Brandt's cormorant					C-A				0-A	
Double-crested cormorant					0-A					
Pelagic cormorant				0	0-A	0			0-A	0
Black oystercatcher				0	0	0			0	0
Western gull				0	0-C				0-A	0
Common murre					A				A	
Pigeon guillemot				C	0				0-C	0-C
Cassin's auklet					C					
Rhinoceros auklet					0					
Tufted puffin					0				0	
<b>Threatened/Endangered Species:</b>										
Aleutian Canada goose										
Southern sea otter										

\*Relative abundance for summer conditions: 0 = occasional, C = common, A = abundant

## PHYSICAL SHORE-ZONE CHARACTERISTICS

UNIT IDENTIFIERS	A	B	C	D	E	F	G	H	I	J	
ALONGSHORE LENGTH (km)	4.4	0.2	0.7	1.5	8.5	0.6	1.1	0.1	1.5	2.0	
ACROSS-SHORE WIDTH (m)	100	-	20-50	20	5-10	<10	30	<5	<5	0-20	
WAVE EXPOSURE	10	1-10	10	10	10	10	10	10	10	10	
ACROSS-SHORE COMPONENTS (morphology, texture)	Cp, Rs Ca, Cg Bb, At Cs Bf, Cs S, Cs	Eb, Cs: Bo Bw, Cs Bc, Cs Bb, At Cs	Cp, Rs Bi, Ccps: Rs Bi, Cb: Rs	Ca, Rs Bi, Cgb: Pl, Cb Rs Ore, Rs	Cp, Rs Bi, Cgb: Rs Ore, Rs	Cp, Rs Bi, Cgb: Rs Ore, Rs	Ca, Rs Pi, Cb Rs Ore, Rs	Ca, Rs Bi, Cs: Rs Ore, Rs	Cc, Rs Ore, Rs Ore, Rs	Cc, Rs Ore, Rs Aw, Au	Ca, Rs Ores, Rs Ca, Rs Bi, Csp Ores, Rs
Primary											
Secondary	Dl, Cs Bs, At Cs Bf, Cs S, Cs	Bs, Cs									
MICRO RELIEF	S	S	R	R	R	R	R	R	R	R	
MACRO RELIEF	S	S	R	R	S	R	R	R	R	R	
SUMMARY CHARACTERISTICS	bg	E	RbmV0	Rv0	RbmV0	Rv0	bs	R	R	Rb'mv0	
OIL RESIDENCE INDEX	1-2	1-2	3	3	3	3	3	3	3	3	
GROUND TRUTH	0	0	0	0	2,3	4	4	4	3,4	4	

### ABBREVIATED PHYSICAL SHORE-ZONE CODING EXPLANATION

This is an abbreviated legend for the physical shore-zone coding sheets; consult the main text for a complete discussion of codes and rationale. Only the across-shore descriptors for morphology and texture are discussed.

ACROSS-SHORE COMPONENTS - dominant morphologic and textural character of each across-shore component, described in a landward to seaward sequence. Each component consists of a geomorphic form descriptor and a substrate descriptor:  
FORM → Bb, Ccg + TEXTURE

The primary geomorphic forms are initially described by a series of 12 codes:  
A Anthropogenic E Coastal Bay, Lagoon, Estuary P Platform  
B Beach I Inlet R River  
C Cliff M Marsh S Bar/Trough  
D Dune O Offshore Rocks T Delta

Each of these groups is then further modified by codes as indicated below.

<b>Anthropogenic (A)</b>	e causeway	j jetty	m marina	t trench
	f float	g groin	r boat ramp	s seawall
			w wharf	
<b>Beach (B)</b>	b berm	i inclined slope	s storm ridge	
	c washover channel	m multiple intertidal bars	t low-tide terrace	
	f beach face	r single intertidal bar	w washover	
<b>Cliff (C)</b>	a active or erosional	p passive	c caves present	
<b>Dune (D)</b>	b blowout	f foredune	s ridge and swale	
	d stabilized	r random form	l longitudinal	
<b>Coastal Bay, Lagoon, Estuary (E)</b>	b enclosed bay	e estuary		
<b>Inlet (I)</b>	e ephemeral	a opening fixed by offshore structures	t ebb-tidal delta	
	s stable	f flood-tidal delta	l ebb-tidal delta	
<b>Marsh (M)</b>	c tidal creek			
<b>Offshore Rocks (O)</b>	e intertidal reef	s sea stack		
	r rock outcrop (>2 m above M.S.L. and <10 m in width or length)			

<b>Platform (P)</b>	h high-tide platform	f horizontal	t terraced
	l low-tide platform	r ramp	i irregular
<b>River (R)</b>	b braided	m multiple	s single channel
<b>Bar/Trough (S)</b>	subtidal	r with rip channels	
<b>Delta (T)</b>	c channel	m multiple channels	p delta plain
	f fan	s single channel	v crevasse
	l levee		

Substrate type or sediment texture are described in detail by a series of codes. The sediments or materials of the shore are initially coded into one of four groups:  
A anthropogenic materials C clastic sediments  
B biogenic sediments R bedrock

<b>Anthropogenic materials (A)</b>	a metal	n concrete (solid)	w bark or wood debris
	d debris, rubble	t logs	
	e concrete (individually formed)	u wood (structural; e.g., pilings or boards)	
<b>Biogenic sediments (B)</b>	l trees or wood particles	o organic litter	
	s shell hash (with a texture as described below)		
<b>Clastic sediments (C)</b>	b boulder	s sand	m mud
	c cobble	s silt	g gravel
	p pebble	f clay	r rubble
<b>Bedrock (R)</b>	l igneous	m metamorphic	s sedimentary

Where more than one texture is present in an across-shore component, several substrates or textures may be indicated. Where one texture physically overlies another, it is indicated by a slash (e.g., Ca/Bs, and over rock). Where several mutually exclusive textures occur within a component, such as rock outcrops within a sand beach, a colon is used to indicate that association (e.g., Cs:Rl).

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**M.M.S. Map# 122**  
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