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

RELATIVE ABUNDANCE OF MAJOR MACROBIOTA*

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

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

PHYSICAL SHORE-ZONE CHARACTERISTICS

UNIT IDENTIFIERS	A	B	C	D	E	F	G	H
ALONGSHORE LENGTH (km)	5.5	0.4	1.8	1.6	0.4	2.2	6.1	1.5
ACROSS-SHORE WIDTH (m)	100	-	0-50	10-75	30	0-50	20-200	20-200
WAVE EXPOSURE	10	1-10	10	10	10	10	10	10
ACROSS-SHORE COMPONENTS (morphology, texture) Primary / Secondary	Dl,Cs Bs,At / Cs Bb,Cs Bf,Cs	Rs,Cs Ie,Cs Bf,Cs	Cc,Rs Ors,Rs --- Cc,Rs Pi,Rs Ores,Rs	Cc,Rs Pi,Rs Ore,Rs	Cc,Rs Bi,Ccb Ph,Cb / Rs Ors,Rs	Cc,Rs Ors,Rs --- Cc,Rs Ph,Rs Ors,Rs	Ca,Rs Bi,Cgsc Ph,Cb / Rs	Ca,Rs Bi,Cgsc Ph,Cb / Rs --- Cc,Rs Pr,Rs Ph,Cb / Rs
MICRO RELIEF	S	-	R	R	R	R	R	R
MACRO RELIEF	S	-	R	R	R	R	S	S
SUMMARY CHARACTERISTICS	bs	bsle	RPO	RPO	RPO	RPO	RPbm	RPb'm
OIL RESIDENCE INDEX	2	1-2	3	3	3	3	3	3
GROUND TRUTH	3,4	0	0	3	0	0	0	3

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, Csg ← 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.

Anthropogenic (A)

e	causeway	j	jetty	m	marina
f	float	g	groin	r	boat ramp
t	trench				
s	seawall				
w	wharf				

Beach (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

Cliff (C)

a	active or erosional	p	passive	c	caves present

Dune (D)

b	blowout	f	foredune	s	ridge and swale
d	stabilized	r	random form	l	longitudinal

Coastal Bay, Lagoon, Estuary (E)

b	enclosed bay	e	estuary

Inlet (I)

e	ephemeral	a	opening fixed by offshore structures		
s	stable	f	flood-tidal delta	l	ebb-tidal delta

Marsh (M) c tidal creek

Offshore Rocks (O)

e	intertidal reef	s	sea stack
r	rock outcrop (>2 m above M.S.L. and <10 m in width or length)		

Platform (P)

h	high-tide platform	f	horizontal	t	terraced
l	low-tide platform	r	ramp	i	irregular

River (R)

b	braided	m	multiple	s	single channel

Bar/Trough (S) subtidal r with rip channels

Delta (T)

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

Each of these groups is then further modified by texture or composition as indicated below.

Anthropogenic materials (A)

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)		

Biogenic sediments (B)

l	trees or wood particles	o	organic litter
s	shell hash (with a texture as described below)		

Clastic sediments (C)

b	boulder	s	sand	m	mud
c	cobble	∮	silt	g	gravel
p	pebble	∉	clay	r	rubble

Bedrock (R)

i	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. Cs/Rs, 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:Ri).

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Sheet 2 of 2