

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	K	L
ROCKY INTERTIDAL MACROBIOTA												
Acorn barnacles	0	0	0		0	0				0	0	0
Chlorophyta	C	C	C		C	C				0	0	0
Porphyra spp.	0-C	0-C	0-C		0-C	0-C				0	0	0
Pelvetiopsis limitata	C	C	C		C	C				C	C	C
Endocladia muricata	C	C	C		C	C				C	C	C
Pelvetia fastigiata												
Fucus distichus	0-C	0-C	0-C		0-C	0-C				0-C	0-C	0-C
Gigartina spp.	C	C	C		C	C				C	C	C
Pollicipes polymerus	C	C	C		C	C				C	C	C
Mytilus californianus	C	C	C		C	C				C	C	C
Corallina spp./Gigartina spp.	0-C	0-C	0-C		0-C	0-C				0-C	0-C	0-C
Postelsia palmaeformis												
Halosaccion glandiforme	C	C	C		C	C				0	0	0
Iridaea spp.	C	C	C		C	C				C	C	C
Odonthalia spp./Rhodomela larix	0	0	0		0	0				0	0	0
Coralline algae	C	C	C		C	C				C	C	C
Phyllospadix spp.	0	0	0		0	0				0-C	0-C	0-C
Alaria marginata	C	C	C		C	C				C	C	C
Egregia menziesii	0-C	0-C	0-C		0-C	0-C				0	0	0
Laminaria spp.	C	C	C		C	C				C	C	C
Lessoniopsis littoralis	C	C	C		C	C				C	C	C
OTHER MACROBIOTA												
Kelp beds:												
Macrocystis spp.												
Nereocystis luetkeana												
Marine mammals:												
Elephant seal												
Harbor seal						0-C		0-C				
Steller sea lion						0-A						
California sea lion						0		0				
Seabird nesting colonies:												
Fork-tailed storm petrel												
Leach's storm petrel												
Ashy storm petrel												
Brandt's cormorant					A					A		
Double-crested cormorant					0-C	0				C		
Pelagic cormorant		0-C	0		0-A	C				0		
Black oystercatcher		0	0							0		
Western gull		0	0		C	0				0		
Common murre					A							
Pigeon guillemot		C			0-A	0				0		
Cassin's auklet												
Rhinoceros auklet												
Tufted puffin												
Threatened/Endangered Species:												
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	K	L
ALONGSHORE LENGTH (km)	1.1	0.3	1.4	0.4	0.7	6.0	0.4	1.2	1.2	1.3	1.2	0.5
ACROSS-SHORE WIDTH (m)	20	<10	20	-	30	10-20	-	40-60	30-40	20-40	10-30	20-40
WAVE EXPOSURE	10	10	10	1-10	10	10	1-10	10	10	10	10	10
ACROSS-SHORE COMPONENTS (morphology, texture)	Cp, Rs Bi, Cgb: Rs Ore, Rs	Ca, Rs Bi, Cbr Ore, Rs	Cp, Rs Bi, Cgb: Rs Ore, Rs	Rs, Cscb Ie, Cscb Bf, Cscb	As, Ad Hw, Cgb Rs, Cgb Bb, Csp Bf, Cs Ore, Rs	Cp, Rs Bi, Cgb: Rs Ore, Rs	Rs, Cscb Is, Cscb	Bw, Csg Bb, At Csg Bf, Csg	Cp, Rs Bf, Cg	Cp, Rs Bi, Cgb: Bi, Cb Ore, Rs	Ca, Rs Bi, Cgb: Rs Bi, Cb Ore, Rs	Cp, Rs Bi, Cgb: Rs Ore, Rs
Primary	Ca, Rs	Ca, Rs	Ca, Rs		As, Ad	Cp, Rs	Rs, Cscb	Bw, Csg	Cp, Rs	Cp, Rs	Ca, Rs	Cp, Rs
Secondary	Bi, Cgb: Rs Ore, Rs	Bi, Cbr Ore, Rs	Bi, Cgb: Rs Ore, Rs		Hw, Cgb Rs, Cgb Bb, Csp Bf, Cs Ore, Rs	Bi, Cgb: Rs Ore, Rs	Is, Cscb	Bb, At Csg Bf, Csg	Bf, Cg	Bi, Cgb: Bi, Cb Ore, Rs	Bi, Cgb: Rs Bi, Cb Ore, Rs	Bi, Cgb: Rs Ore, Rs
MICRO RELIEF	R	R	R	-	R	R	-	-	-	R	R	R
MACRO RELIEF	S	R	S	-	R	R	-	-	-	R	R	R
SUMMARY CHARACTERISTICS	Rb'mv	Rv	RbmvO	bgvOle	bgvO	RbmvO	bgIs	bg	bg	bmV0	RbmvO	bgvO
OIL RESIDENCE INDEX	3	3	3	1-2	1-2	3	1-2	2	3	3	3	3
GROUND TRUTH	0	0	0	2	2	0	0	0	0	0	0	0

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 landmark 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
B Beach
C Cliff
D Dune
E Coastal Bay, Lagoon, Estuary
F Platform
G River
H Marsh
I Inlet
J Bar/Trough
K Delta

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

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

Beach (B)
b berm
c washover channel
f beach face
i inclined slope
m multiple intertidal bars
r single intertidal bar
s storm ridge
t low-tide terrace
w washover

Cliff (C)
a active or erosional
p passive
c caves present

Dune (D)
b blowout
d stabilized
f foredune
r random form
s ridge and scarp
l longitudinal

Coastal Bay, Lagoon, Estuary (E)
b enclosed bay
e estuary

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

Marsh (M)
c tidal creek

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

Platform (P)
b high-tide platform
l low-tide platform
f horizontal
g ramp
t terraced
i irregular

River (R)
b braided
m multiple
s single channel

Bar/Trough (S) subtidal
r with rip channels

Delta (T)
c channel
f fan
l levee
m multiple channels
s single channel
p delta plain
v crevasse

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
B biogenic sediments
C clastic sediments
R bedrock

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

Anthropogenic materials (A)
a metal
d debris, rubble
e concrete (individually formed)
n concrete (solid)
l logs
u wood (structural; e.g., pilings or boards)

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

Clastic sediments (C)
b boulder
c cobble
p pebble
s sand
slt silt
cl clay
m mud
g gravel
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. Ca/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:Rl).

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