

# 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	M	N	O
<b>ROCKY INTERTIDAL MACROBIOTA</b>															
Acorn barnacles	0	0		0						0		0		0	
Chlorophyta				0						0		0		0	
Porphyra spp.				0											
<i>Pelvetiopsis limitata</i>										0		0		0	
<i>Endocladia muricata</i>	C	C								0		0		C	
<i>Pelvetia fastigiata</i>										0		0		0	
<i>Fucus distichus</i>														0	
<i>Gigartina</i> spp.	C	C								0		0		C	
<i>Pollicipes polymerus</i>	0	0								0		0		0	
<i>Mytilus californianus</i>	0	0								0		0		0-C	
<i>Corallina</i> spp./ <i>Gigartina</i> spp.	0	0								0		0		0	
<i>Postelsia palmaeformis</i>	C	C								C		C		C	
<i>Halosaccion glandiforme</i>										0		0		0	
<i>Iridaea</i> spp.	C	C								C		C		C	
<i>Odonthalia</i> spp./ <i>Rhodomela larix</i>															
Coralline algae	C	C								C		C		C	
<i>Phyllospadix</i> spp.	C	C								0-C		0-C		0-C	
<i>Alaria marginata</i>	C	C								0-C		0-C		0-C	
<i>Egregia menziesii</i>	C	C								C		C		C	
<i>Laminaria</i> spp.	C	C								C		C		C	
<i>Lessoniopsis littoralis</i>										0		0		0	
<b>OTHER MACROBIOTA</b>															
<b>Kelp beds:</b>															
<i>Macrocystis</i> spp.	C	C													
<i>Nereocystis luetkeana</i>															
<b>Marine mammals:</b>															
Elephant seal															
Harbor seal			0-A							0-C		0		0-C	
Steller sea lion							0								
California sea lion			0												
<b>Seabird nesting colonies:</b>															
Fork-tailed storm petrel															
Leach's storm petrel															
Ashy storm petrel															
Brandt's cormorant														C	
Double-crested cormorant															
Pelagic cormorant	0										0			A	
Black oystercatcher														0	
Western gull															
Common murre															
Pigeon guillemot	0										0			0	
Cassin's auklet															
Rhinoceros auklet															
Tufted puffin															
<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	K	L	M	N	O	
ALONGSHORE LENGTH (km)	0.4	0.3	2.1	0.1	1.8	0.0	7.4	0.2	2.3	0.3	0.7	0.2	0.3	2.0	0.6	
ACROSS-SHORE WIDTH (m)	<10	50	10-40	<5	<5	-	30-100	-	30	30	10-40	<5	30	<5	10-20	
WAVE EXPOSURE	10	10	10	10	10	1	10	1-10	10	10	10	10	10	10	10	
ACROSS-SHORE COMPONENTS (morphology, texture)	Ca,Rs Pi,Rs Ore,Rs	Ca,Rs Pi,Rs Ore,Rs	Ca,Rs Bi,Cs; Rs Pi,Rs Ore,Rs	Aj,Ar Ca,Rs	Aj,Ar Ca,Rs	EB,Cs; Ar Is,Ar	Ca,Rs Bb,Csr BF,Cs Cp,Rs Dl,Cs BF,Cs Ie,Cs	Rs,Cs Ie,Cs BF,Cs	Ca,Rs Bi,Csr BF,Cs Or,Rs	Ca,Rs Pi,Rs	Ca,Rs Bi,Cs; Rs Pi,Rs Ore,Rs	Cc,Rs Ores,Rs	Ca,Rs Bi,Csr BF,Cs Or,Rs	Cc,Rs Ores,Rs	Cc,Rs Ores,Rs	Cp,Rs Bf,Cs; Rs Ore,Rs Ie,Cs
Primary																
Secondary																
MICRO RELIEF	R	R	R	R	R	-	S	-	S	R	R	R	S	R	S	
MACRO RELIEF	R	S	R	R	R	R-S	S	-	S	R	R	R	S	R	S	
SUMMARY CHARACTERISTICS	Rv	RPO	RPB'sO	R	A	E	bs	Ie	bs	R	RPB'sO	RO	bs	RO	bsO	
OIL RESIDENCE INDEX	3	3	3	3	3	1-2	2	1-2	3	3	3	3	3	3	3	
GROUND TRUTH	0	0	3	0	0	0	2,3,4	0	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 landward to seaward sequence. Each component consists of a geomorphic form descriptor and a substrate descriptor:  
FORM + Bb, Csr + 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 t trench  
f float g groin r boat ramp 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 ferodune 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)

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 E bedrock

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

### Anthropogenic materials (A)

a metal u 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 e gravel  
p pebble f clay r rubble

### Bedrock (E)

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., Cc/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., Cc:Rl).

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**M.M.S. Map# 76**  
**Sheet 2 of 2**