

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

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

## PHYSICAL SHORE-ZONE CHARACTERISTICS

UNIT IDENTIFIERS	A	B	C	D	E	F	G
ALONGSHORE LENGTH (km)	0.2	0.4	0.4	0.1	0.3	1.1	2.8
ACROSS-SHORE WIDTH (m)	30-75	20-50	20-50	20-50	10-100	75	150
WAVE EXPOSURE	10	10	10	10	10	10	10
ACROSS-SHORE COMPONENTS (morphology, texture)	Cp, Rs Bi, Csc: Rs Pf, Cb Rs Ore, Rs	Cp, Rs Bi, Cg: Rs Bt, Cb: Rs Ore, Rs	Ca, Rs Bb, Csp Bi, Csp Bt, Cb Ore, Rs	Ca, Rs Bi, Csp Rs Bt, Cb Ore, Rs	Ca, Rs Bi, Cg: Rs Ore, Rs Ca, Rs Pf, Rs Ore, Rs	Ca, Rs Bs, At Cg Bf, Cg Ore, Rs	Ca, Rs Bs, At Cspc Bf, Csp: Rs Ore, Rs
Primary	Ore, Rs	Ore, Rs					
Secondary		Is, Cg					
MICRO RELIEF	R	R	S	S	R	R	S
MACRO RELIEF	R	S	S	S	R	S	S
SUMMARY CHARACTERISTICS	RPbsvO	bsvO	bsO	RPO	Rb'svOle	b'svO	bsvO
OIL RESIDENCE INDEX	3	3	2	3	3	2	2
GROUND TRUTH	0	0	0	0	0	2	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, Csp + 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		
	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

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

<b>Anthropogenic materials (A)</b>	a metal	n concrete (solid)	w bark or wood debris
	d debris, rubble	l logs	u wood (structural; e.g., pilings or boards)
	e concrete (individually formed)		
<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	sl 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., 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:Rl).

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**M.M.S. Map# 60**  
**Sheet 2 of 2**