

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	0	0
Chlorophyta		0	0	C	0	C		0	0	0		
Porphyra spp.												
Pelvetiopsis limitata												
Endocladia muricata				C	C	C		C	C	C	C	C
Pelvetia fastigiata				0-C	0-C	0-C		C	C	C		
Fucus distichus								0	0	0		
Gigartina spp.				C	C	C		C	C	C	C	C
Pollicipes polymerus				0-C	0-C	0-C		C	C	C	C	C
Mytilus californianus				C-A	C-A	C-A		C-A	C	C	C	C
Corallina spp./Gigartina spp.				C	C	C		C	C	C	C	C
Postelsia palmaeformis												
Halosaccion glandiforme				0-C	0-C	0-C		C	C	C	C	C
Iridaea spp.				C	C	C		C	C	C	C	C
Odonthalia spp./Rhodomela larix												
Coralline algae				C	C	C		C	C	C	C	C
Phyllospadix spp.				0-C	0-C	0-C		0-C	0-C	0-C	0-C	0-C
Alaria marginata				C	C	C		C				
Egregia menziesii				C	C	C		C	C	C		
Laminaria spp.												
Lessoniopsis littoralis												
OTHER MACROBIOTA												
Kelp beds:												
Macrocystis spp.												
Nereocystis luetkeana												
Marine mammals:												
Elephant seal										0		
Harbor seal										0-C		
Steller sea lion												
California sea lion												
Seabird nesting colonies:												
Fork-tailed storm petrel												
Leach's storm petrel												
Ashy storm petrel												
Brandt's cormorant												
Double-crested cormorant												
Pelagic cormorant								C	C	C		
Black oystercatcher								0	0	0	0	
Western gull								0	0	0		
Common murre												
Pigeon guillemot						A		A	A	A	A	
Cassin's auklet												
Rhinoceros auklet								C	C	C		
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)	0.8	0.7	0.5	0.6	0.3	1.2	1.0	1.0	0.4	2.5	0.8	1.2	
ACROSS-SHORE WIDTH (m)	100-150	50	75	20-50	50	1-30	100	-	5-20	0-30	5-30	20-50	
WAVE EXPOSURE	10	10	10	10	10	10	10	10	8-10	10	10	8	
ACROSS-SHORE COMPONENTS (morphology, texture)	Cp,Csp Dl,Cs Bs,Csp Bb,Cs BF,Cs	Ca,Rs Bf,Csc Bt,Cs Oe,Rs Ca,Rs Oe,Rs	Ca,Rs Bf,Cgcb Pf,Cb Ca,Rs Or,Rs	Ca,Rs Bf,Csc Bt,Cs Ca,Rs	Ca,Rs Pi,vCb Rs	Cc,Rs Pr,Rs Os,Rs	Ca,Rs Bf,Cs: Rs Bt,Cs	Cc,Rs Cc,Rs Or,Rs	Cc,Rs Or,Rs	Ca,Rs Pr,vCb Rs Cc,Rs Bf,Ccb Pi,Rs Os,Rs	Ca,Rs Pr,Rs Os,Rs	Cc,Rs Pr,vCb Rs Or,Rs	Cc,Rs Pr,vCb Rs Or,Rs
Primary		Ca,Rs	Ca,Rs	Ca,Rs		Ca,Rs				Ca,Rs	Ca,Rs	Ca,Rs	
Secondary		Oe,Rs	Or,Rs	Ca,Rs		Bf,Cscb Pi,Rs Oe,Rs				Os,Rs	Bf,Ccb Pi,Rs Oe,Rs	Cc,Rs Bf,Ccb Pi,Rs Oe,Rs	
MICRO RELIEF	S	S	R	S	R	R	S	R	R	R	R	R	
MACRO RELIEF	S	S	R	S	S	R	R	R	R	R	R	R	
SUMMARY CHARACTERISTICS	bs	Rb's0	Rb'mv0	Rb'sv	RPv	Rb'mv0	bs	RO	Rv0	RO	Rb'm0	Rb'mv0	
OIL RESIDENCE INDEX	2	3	3	3	3	3	3	3	3	3	3	3	
GROUND TRUTH	0	0	0	0	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, Csp, etc. TEXTURE

The primary geomorphic forms are initially described by a series of 12 codes:

A Anthropogenic	E Coastal Bay, Lagoon, Estuary	F 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 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	r 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., 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., Ca:Rl).

Prepared for
Minerals Management Service
Pacific Outer Continental Shelf Region
Los Angeles, California

by
Woodward-Clyde Consultants
Environmental Systems Division
San Francisco, California

November, 1982

M.M.S. Map# 40
Sheet 2 of 2