

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 |
|---------------------------------------|---|-----|---|-----|-----|-----|---|-----|---|
| ROCKY INTERTIDAL MACROBIOTA | | | | | | | | | |
| Acorn barnacles | | 0 | | 0 | 0 | 0 | | | |
| Chlorophyta | | 0-C | | 0-C | 0-C | 0-C | | | |
| Porphyra spp. | | | | 0 | 0 | 0 | | | |
| Pelvetiopsis limitata | | C | | C | C | C | | | |
| Endocladia muricata | | C | | C | C | C | | | |
| Pelvetia fastigiata | | | | | | | | | |
| Fucus distichus | | C | | C | C | C | | | |
| Gigartina spp. | | C | | C | C | C | | | |
| Pollicipes polymerus | | C | | 0-C | 0-C | 0-C | | | |
| Mytilus californianus | | C | | 0-C | 0-C | 0-C | | | |
| Corallina spp./Gigartina spp. | | 0-C | | 0-C | 0-C | 0-C | | | |
| Postelsia palmaeformis | | C | | C | C | C | | | |
| Halosaccion glandiforme | | 0 | | 0 | 0 | 0 | | | |
| Iridaea spp. | | C | | C | C | C | | | |
| Odonthalia spp./Rhodomela larix | | 0 | | 0 | 0 | 0 | | | |
| Coralline algae | | C | | C | C | C | | | |
| Phyllospadix spp. | | C | | C | C | C | | | |
| Alaria marginata | | C | | C | C | C | | | |
| Egregia menziesii | | C | | C | C | C | | | |
| Laminaria spp. | | C | | C | C | C | | | |
| Lessoniopsis littoralis | | C | | C | C | C | | | |
| OTHER MACROBIOTA | | | | | | | | | |
| Kelp beds: | | | | | | | | | |
| Macrocystis spp. | | | | | | | | | |
| Nereocystis luetkeana | | | | | | | | | |
| Marine mammals: | | | | | | | | | |
| Elephant seal | | | | | | | | | |
| Harbor seal | | | 0 | | | | | 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 | | | | A | 0-C | | | | |
| Double-crested cormorant | | | | | A | | | | |
| Pelagic cormorant | | | 0 | C-A | C-A | | | | |
| Black oystercatcher | | | | 0 | 0 | | | | |
| Western gull | | | 0 | 0-C | A | | | | |
| Common murre | | | | | | | | | |
| Pigeon guillemot | | | 0 | 0-C | C-A | | | | |
| Cassin's auklet | | | | | | | | | |
| Rhinoceros auklet | | | | | 0 | | | | |
| Tufted puffin | | | | | 0 | | | | |
| 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 |
|---|--|---------------------------|---|---|-----------------|-----------------|------------------|---|--|
| ALONGSHORE LENGTH (km) | 1.0 | 0.4 | 3.5 | 1.0 | 0.7 | 0.2 | 0.2 | 5.6 | 2.3 |
| ACROSS-SHORE WIDTH (m) | 75-100 | 30 | 75-100 | 20-30 | <5 | <5 | - | 100-150 | 100-150 |
| WAVE EXPOSURE | 10 | 10 | 10 | 8-10 | 10 | 10 | 1-10 | 10 | 10 |
| ACROSS-SHORE COMPONENTS (morphology, texture) | Ca,Cg Bs,At Cpc Bb,Cg BF,Csp | Cp,Rs Bi,Ccb Ore,Rs | Ca,Cg Bs,At Cs Bb,Cs BF,Csp | Bs,At Cpc Bi,Cpc PF,CpCb Rs Ore,Rs | Cc,Rs Ore,Rs | Ca,Rs Ore,Rs | Rs,Csg Is,Csg | D1,Cs Bs,At Cs Bb,Cs BF,Cs S, Cs | D1,Cs Bs,At Cg Bb,Cspc BF,Csp S, Cs |
| Primary | | | | | | | | | |
| Secondary | | | | | | | | | |
| MICRO RELIEF | S | R | S | R | R | R | - | - | S |
| MACRO RELIEF | S | R | S | S | R | R | - | - | S |
| SUMMARY CHARACTERISTICS | bg | bmV0 | bs | RbmV0 | Rv0 | Rv0 | IsE | bs | bm |
| OIL RESIDENCE INDEX | 2 | 3 | 2 | 3 | 3 | 3 | 1-2 | 2 | 2 |
| GROUND TRUTH | 0 | 0 | 3 | 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, 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 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 t terraced
l low-tide platform c 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 l logs u wood (structural; e.g., pilings or boards)
e concrete (individually formed)

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 d 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