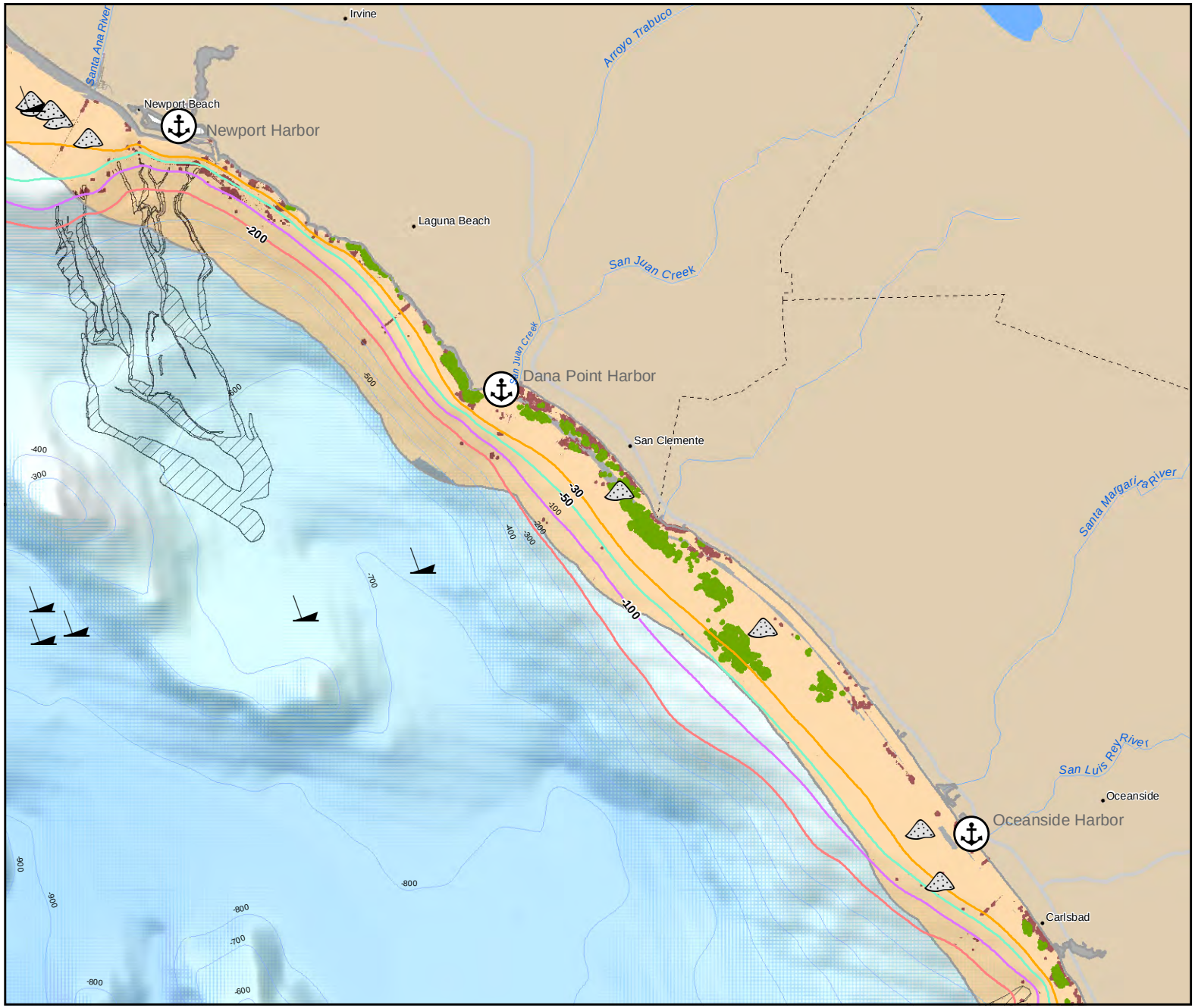
Soft and Hard Bottom Habitats

Subregion 4 - Newport Beach to Agua Hedionda



For more detailed maps please visit:
www.marinemap.org/marinemap

Legend

- South Coast Study Region Boundary
- Ports & Harbors
- Shipwrecks
- Artificial Reefs
- Submarine Canyons
- Maximum Extent of Kelp
- Sulfide Vent

Depth Zones
- -200
- -100
- -50
- -30
- Isobaths 100m Intervals

Substate
- Hard
- Soft
- Unknown

California Marine Life Protection Act (MLPA) Initiative

Disclaimer:

Kelp:

The distribution of kelp represented on this map is derived from data collected by aerial surveys conducted by CDFG starting in 1989, and collected every year from 2002-2006. Kelp distribution on this map represents the largest possible extent of kelp canopy based on these data, which represent the best readily available information.

Substrate Data

Fine-scale substrate data displayed on this map represent a union of data collected by, Seafloor Mapping Lab at California State University Monterey Bay, United States Geological Survey (USGS), Ocean Imaging, and the San Diego Association of Governments (SANDAG). Most datasets included in the fine scale substrate layer are derived from multibeam sonar. Gaps in the fine-scale data exist in the vicinity of all islands as well as along the mainland nearshore area, shallower than approximately 20 meters.

Where fine scale data were unavailable at San Nicolas Island, coarse scale data are displayed. Coarse-scale data tends to overestimate abundance of rocky substrate.
Where nearshore fine-scale data were unavailable, a linear proxy was created by drawing a line roughly parallel to shore, through nearshore areas where fine-scale data exist. Sections of the line were divided into either "hard" or "soft" categories in each area, depending on the dominant habitat type in that portion of the coast between 0 and 30 meters depth. Additional datasets were referenced where possible, including areas of kelp growth, shoreline habitat types, and Bight 08 reef characterizations.

Projection Information:

Name: NAD 1983 California Teale Albers
Projection: Albers
Datum: North American 1983

N

0 2 4 8 Miles

1:350,000

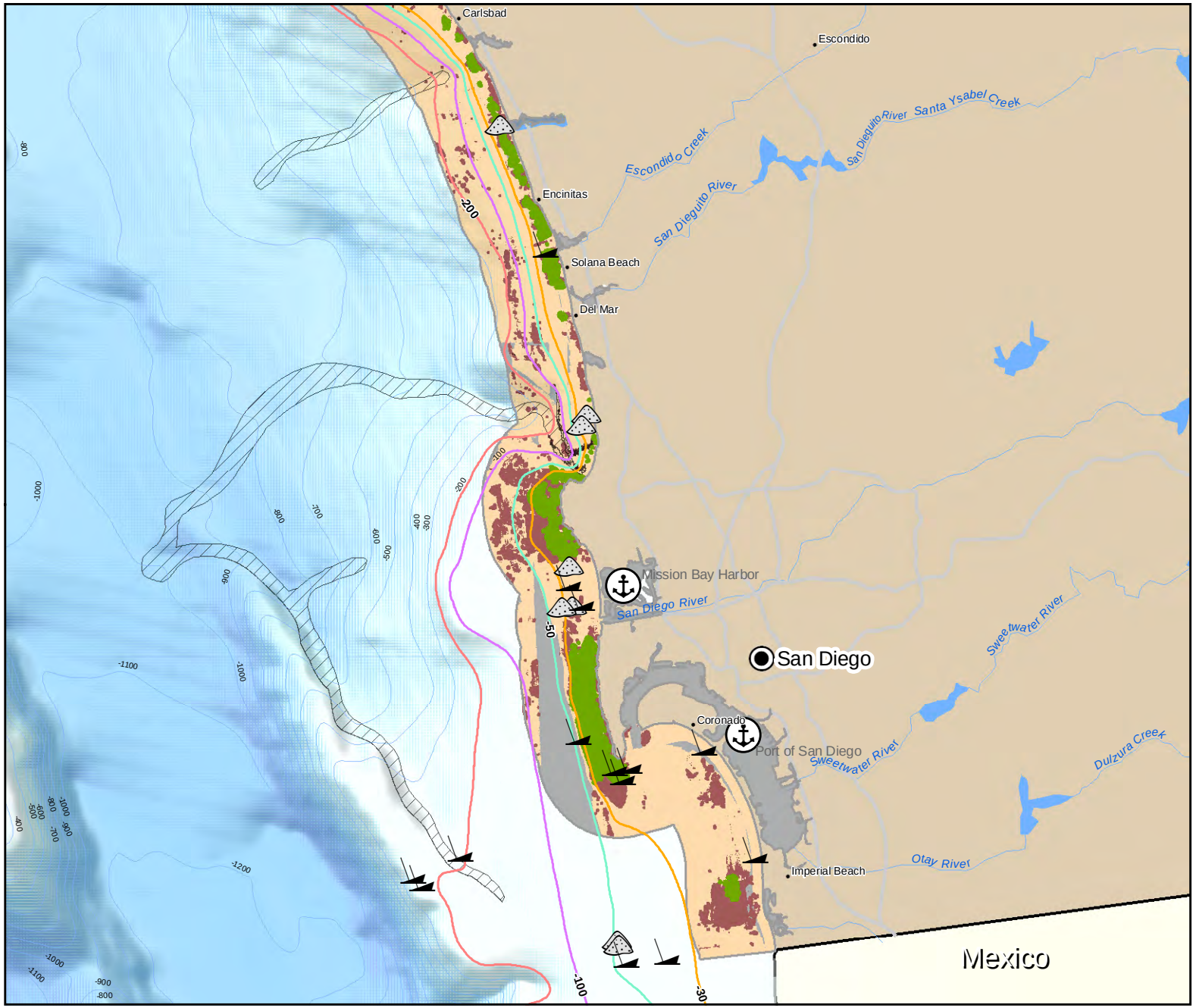
Data Sources :
Shipwrecks - NOAA Electronic Navigational Charts
Artificial reefs - California Department of Fish and Game
Ports - California Department of Fish and Game
Substrate - SFML, USGS, SANDAG
Kelp - California Department of Fish and Game (1989, 2002 - 2006)

Version: 2.0
Printing Date: 7/4/2009

Map 3.1- 2 d

Soft and Hard Bottom Habitats

Subregion 5 - Agua Hedionda to California / Mexico Border



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Projection Information:

Name: NAD 1983 California Teale Albers
Projection: Albers
Datum: North American 1983

N

0 2.5 5 10 Miles

1:420,000

Data Sources :
Shipwrecks - NOAA Electronic Navigational Charts
Artificial reefs - California Department of Fish and Game
Ports - California Department of Fish and Game
Substrate - SFML, USGS, SANDAG
Kelp - California Department of Fish and Game (1989, 2002 - 2006)

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Map 3.1- 2 e