

## **BOEM ENVIRONMENTAL STUDIES PROGRAM: Ongoing Studies**

**Region:** Pacific OCS Region

**Planning Area(s):** Southern California

**Title:** Multibeam Survey of Eastern Santa Barbara Channel

**BOEM Information Need(s) to be Addressed:** BOEM needs fine scale seafloor habitat maps in the vicinity of OCS platforms. BOEM uses this information to evaluate modifications to platforms and pipelines, proposed anchoring activities and discharges, and projects which are proposed in the vicinity of OCS facilities. The information in the eastern Santa Barbara Channel is outdated or non-existent. BOEM and USGS have conducted habitat mapping for deep OCS platform areas and near shallow platforms. This study will fill in the area not mapped by the two previous studies and, in addition, cover pipeline and power cable routes. This study supports the West Coast Governors Agreement on Ocean Health Strategic Plan to which the Department of the Interior is a Federal co-lead.

**Total BOEM Cost:** \$300,000      **Period of Performance:** FY 2010-2012

**Conducting Organization:** USGS, Pacific Coastal and Marine Science Center

**Principal Investigators:** Guy R. Cochrane and Peter Dartnell

**BOEM Contact:** [Mary Elaine Helix](#)

### **Description:**

Background: Except for the data collected recently by BOEM in an Interagency Agreement with USGS, the basic geologic information in the eastern Santa Barbara Channel is especially outdated or non-existent, and habitat mapping has not been done. However, this area is an active area for potential projects and for modifications to older oil and gas facilities and so the need for broad information is high. BOEM requires the operators to conduct site specific surveys of their pipeline routes if they propose a modification to their pipeline in accordance with Notice to Lessees (NTL's). However, the broader information which BOEM requires in order to review other OCS projects not covered by the NTL is not available. This includes; evaluate OCS operations in context with the regional environment, assess the rarity of hard bottom sensitive habitat, evaluate decommissioning alternatives, and examine other projects proposed in the same general area as OCS facilities (such as LNG or mariculture projects) is not available. BOEM and USGS through a 2004 IA, conducted habitat mapping along two zones, one for deep OCS platform areas and one for nearshore shallow platforms. This study will fill in the area between the two studies for a complete mapping of the eastern Santa Barbara Channel, an area with 17 OCS production facilities.

These data advance the West Coast Governor's Agreement on Ocean Health

State/Federal initiative to map the area off California for use in making decisions about offshore alternative energy projects and Marine Protected Areas. NOAA/MBARI has mapped the deeper western channel over the past year. In combination with the work completed recently by BOEM and USGS, this project will complete mapping of the Santa Barbara Channel. These data in other areas were used to accurately map individual tar seep “volcanoes” so that samples of oil could be collected for fingerprinting.

Objectives: The objective of the study is to map benthic habitats in the Eastern Santa Barbara Channel in an area not previously mapped or where the maps are outdated. Types of benthic habitats of interest to BOEM include long-lived high relief rocky reef habitats characterized by large sponges and corals; white abalone habitat; and rock fish habitats.

Methods: The project includes a multibeam high resolution sonar survey followed by a towed camera survey along prescribed transect lines to maximize characterization of identified multibeam textures. Protocols will be the same as recent surveys. A benthic biologist participating in the towed camera survey enters descriptive biological data (species identified in the photos in categories) in the field and in the lab characterizing the habitat along the transect lines. Resolution parameters, metadata requirements and quality will follow Federal guidelines.

All of the data is analyzed in the lab so that the areal extent of a given habitat identified in the transect can be interpolated across the identified multibeam texture.

**Current Status:** Analyzing data and preparing report

**Final Report Due:** 2012

**Publications Completed:** None at this time

**Affiliated WWW Sites:** None at this time

**Revised Date:** April 18, 2012