

BOEM ENVIRONMENTAL STUDIES PROGRAM: Ongoing Studies

Region: Pacific OCS Region

Planning Area: Southern California

Title: Completion of Fish Assemblage Surveys around Manmade Structures and Natural Reefs off California

BOEM Information Need(s) to be Addressed: Completion of this long-term data set will provide the foundational information of regional rockfish populations so that BOEM can specify requirements to industry or other interested parties when they propose decommissioning.

Total BOEM Cost: \$775,000 **Period of Performance:** FY 2010 - 2012

Conducting Organization: University of California, Santa Barbara

Principal Investigator: Dr. Milton Love

BOEM Contact: [Dr. Ann Bull](#)

Description:

Background: The fate of spent offshore platforms off California continues to be a subject of considerable debate. Platforms and reefs offshore the southern areas of Ventura, Los Angeles, and Orange Counties have been surveyed once or twice. Platforms off northern Santa Barbara and Ventura Counties have been surveyed multiple times with a few surveyed annually during the past 13 years of research. The Interagency Decommissioning Working Group and the Pacific Region recommend that BOEM complete this long-term study project through the 15-year mark. This 2-year effort will thus complete the overall research effort and conclude 1.5 decades of surveys and analyses. Data gaps may continue to exist, but may be approached on a case-by-case basis when decommissioning is proposed for individual structures. It is recognized that knowledge of fish assemblages inhabiting OCS facilities is fundamental to determining the effects of decommissioning on fish populations. Since 1995 the U.S. Geological Survey, the Minerals Management Service, and most recently the California Artificial Reef Enhancement Program (CARE), have provided funding to conduct research on the fishes that live around the platforms and on natural rock outcrops of Central and southern California. The goal of this research is to determine the patterns of fish assemblages around both platforms and natural reefs. A major synthesis of this work was published in 2003 and has been well received. This research involves broad scale surveys at numerous oil/gas platforms and natural reefs. When complete, this long-term data set will provide the foundational information of regional populations so that BOEM can specify requirements and/or additional surveys to industry or other interested parties when they propose decommissioning.

Objectives: Research objectives include 1) characterizing the fish assemblages around all Pacific platforms and on nearby natural reefs, 2) describing the spatial and temporal patterns of fish diversity, density and size distribution among habitat types, and 3) completion of the 15 year data-set so that trend analyses or synthesis documents can be produced in the future.

Methods: A multiple-year fish survey of platforms and nearby natural outcrops using the same methodology used over the past 13 years. Identical methodology will ensure future comparability of data.

At Platforms and Natural Outcrops within SCUBA Depth:

- 1) Conduct scuba surveys of the upper 30 m of these platforms, along with surveys of relatively shallow natural outcrops.

At Platforms and Natural Outcrops below SCUBA Depth:

- 1) Conduct fish surveys using the *Delta* or *Dual DeepWorker* submersible, a along belt transects about two meters from the substrata.
- 2) Make transects around the bottom of the platform and around each set of horizontal cross beams up to a depth of approximately 30 m (100 ft) below the surface.
- 3) Conduct belt transects to sample the shell mounds and natural rock outcrops. During all transects document (1) species (if known); (2) estimated total length; (3) the habitat it occupied (e.g., rock, sand, mud, cobble, boulder); (4) its position relative to the substrate (e.g., in crevice, on reef crest, on slope, above structure); and (5) the distance of the fish from that substrate.

Current Status: Fieldwork completed and analyses begun

Final Report Due: June 2012

Publications Completed: None at this time.

Affiliated WWW sites: <http://www.lovelab.id.ucsb.edu>

Revised date: April 18, 2012