

Environmental Studies Program: Ongoing Study

Study Area(s): Western GOM, Central GOM

Administered By: GOM OCS Region

Title: Multibeam Survey of Small Topographic Features to Determine Efficacy of Current “No Activity Zones” (NSL #GM-17-07)

BOEM Information Need(s) to be Addressed: Since the 1970-80’s there has not been an update or an evaluation of the efficacy of the “No Activity Zones” (NAZ) associated with topographic features in the Gulf of Mexico. The NAZs distance bottom-disturbing activities away from potentially sensitive habitats. The NAZ boundaries were defined by bathymetric contours derived from some of the earliest survey work using outdated methods. Technological advances in survey equipment, techniques and Geographic Information Systems, combined with an improved understanding of the ecology of topographic features, necessitates that BOEM obtain and use updated bathymetric survey data to help determine if the NAZ boundaries are accurately drawn and functioning as originally intended, addressing the agency’s NEPA requirements to periodically re-evaluate post-lease mitigations. Because of NOAA’s shared interest in data collection about northern Gulf of Mexico bank features, this project will be a collaborative effort between BOEM and the Flower Garden Banks National Marine Sanctuary.

Total BOEM Cost: \$360,000

Period of Performance: FY 2017–2019

Conducting Organization(s): NOAA FGBNMS via Inter-agency agreement

Principal Investigator(s):

BOEM Contact(s): Mark Mueller, mark.mueller@boem.gov

Description:

Background: This is a collaborative project between BOEM and NOAA to collect new multibeam bathymetry of the 14 features of highest interest to BOEM along with various other areas of mutual interest to both agencies. NOAA is providing the R/V Manta at a discounted daily rate and also conducting a two-bank calibration cruise as an in-kind contribution. The Sanctuary’s objective is to better understand the types and distribution of bank habitats found throughout the Sanctuary’s region of interest region, including in areas proposed for Sanctuary expansion. BOEM’s re-evaluation of the NAZs began in 2014; the 14 sites identified for this project are the Topographic Features where data was not of sufficiently quality (*i.e.*, no multibeam survey data existed). Of the 38 identified topographic features, 14 banks require additional bathymetric surveys. Additional bathymetric data collected by the Sanctuary outside of these 14 features could also potentially indicate previously unknown Topographic Features. More likely, the additional areas may contain new Potentially Sensitive Biological Features such as

patches of large pinnacles that would require mitigation during benthic reviews of permitted OCS activities.

Objectives: The objective of this study is to map topographic features in the Gulf of Mexico using a multibeam echosounder sonar system and provide post-processed datasets (Figure 1). The finished datasets will be used by both BOEM and NOAA in order to reevaluate and modify agency policies used to manage environmental resources. The finalized datasets will also be made publicly available.

Methods: Through an Interagency Agreement with NOAA, NOAA and its selected subcontractor will conduct the survey of identified locations in as few days at sea as possible, likely over 2 or 3 cruise legs. Upon survey completion, NOAA/subcontractor will also be responsible for data post-processing and delivery to BOEM in a format acceptable to BOEM GIS personnel. The data would then be incorporated in to the on-going BOEM effort to reevaluate NAZ boundaries.

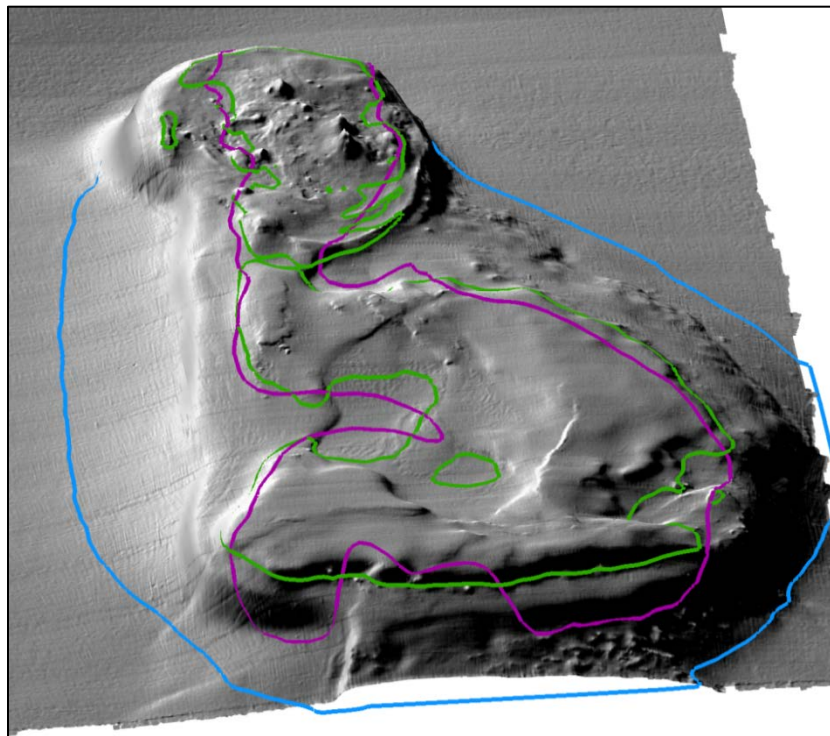


Figure 1. Example of a multibeam sonar-derived bathymetry dataset (gray) depicting the relief of a topographic feature. The purple line represents the current NAZ boundary with no buffer. The green line represents a new outline of the bank feature, redrawn based on the new bathymetry data. The blue line represents the proposed new NAZ boundary incorporating a 500' buffer around the bank feature.

Current Status: BOEM funding requisitioned and obligated; Interagency Agreement submitted to NOAA for Solicitor review; depending on NOAA review time, study activity should start prior to end of FY2017.

Final Report Due: 2019

Publications Completed: None to date

Affiliated WWW Sites: None to date

Revised Date: June 15, 2017