



## Sanctuary Advisory Council

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Suzanne VanParreren, Sapelo Island  
NEER

Dr. Susan White, NOAA Sea Grant

Jene Nissen, U.S. Navy

Kevin Mitchell, NOAA Office for Law  
Enforcement

November 20, 2015

Dr. Rodney Cluck  
Chief, Division for Environmental Sciences  
Bureau of Ocean Energy Management  
Mail Stop VAM-OEP  
45600 Woodland Road  
Sterling Virginia, 20166

RE: South Atlantic Research ideas for the BOEM  
Environmental Studies Program

Dear Dr. Cluck,

The Gray's Reef National Marine Sanctuary (GRNMS) Advisory Council is a nineteen member, community-based advisory group consisting of representatives from a variety of user groups, government agencies and the public at large. The council meets regularly to discuss and consult on management of the sanctuary and activities occurring in the greater region that can impact sanctuary resources. Our May 2015 council meeting featured a presentation by Dr. Brad J. Blythe, Chief of the Branch of Biological and Social Sciences, Division of Environmental Sciences for the Bureau of Ocean Energy Management (BOEM). He provided an overview on oil and gas leasing in the South Atlantic, including the current decision-making process and associated timeframe. During discussion that followed the presentation, BOEM's Environmental Studies Program (ESP) was identified as an opportunity for the Council to weigh in on research priorities needed to help inform leasing and development of oil, natural gas, renewable energy and marine minerals on the South Atlantic's Outer Continental Shelf. In response to the current invitation to provide research ideas for BOEM's Fiscal Year 2017 ESP and given the Council's interest in the ongoing conservation of GRNMS, this letter serves to provide feedback and ideas on regional research priorities.

The National Oceanic and Atmospheric Administration (NOAA) designated Gray's Reef National Marine Sanctuary in 1981 to protect the quality of this unique and fragile ecological community. In 2014, NOAA's Office of National Marine Sanctuaries (ONMS) approved an updated Sanctuary

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Management Plan which guides GRNMS activities. Scientific research remains a core goal in the Sanctuary's management plan and a variety of projects are underway to characterize, monitor and enhance understanding of the sanctuary environment and its process. A science team has recently been initiated to complete a connectivity study evaluating the biological, physical and chemical connections between the sanctuary and other coastal and marine resources. Sanctuary staff and the Council are also committed to understanding the potential impacts that ocean uses could have on sanctuary resources. Given these connections between BOEM's management of Outer Continental Shelf (OCS) resources and the Sanctuary, the GRNMS SAC supports the following research projects:

Seafloor Habitats: Gray's Reef is one of the largest near-shore "live-bottom" reefs of the southeastern United States and the sanctuary supports a broad range of research within its boundaries to help better understand the geology and biology of such habitats. Supporting diverse invertebrate populations which in turn support an array of fish species, reefs are sensitive to bottom-disturbing activities that can be associated with OCS energy development and marine mining. Data on the full distribution of live bottom habitat and associated species within the South Atlantic is limited. The Council supports BOEM's Environmental Studies Program priorities that would enable additional baseline mapping these resources, including: (1) long-term environmental monitoring assets in Atlantic deep waters in order to better understand places such as the Atlantic shelf/slope break, (2) an Atlantic Deepwater Observatory Network (ADEON) study in the Mid- and South Atlantic to provide baseline measurements and environmental monitoring capabilities and (3) additional Fishery Physical Habitat and Epibenthic Invertebrate Baseline Data Collection.

Ecosystem Modeling: Baseline seafloor mapping is a core requirement in assessing resources on the South Atlantic OCS. However, the relationships between habitats, communities, and oceanographic characteristics are required in evaluating the potential impacts of energy development. The Council asks that the BOEM support the development of ecological models (such as spatially explicit coupled species and environmental process models) to predict responses of key populations, communities and ecological processes on the South Atlantic shelf and slope to natural variation, including climate change, and human-caused disturbances. Future monitoring and research targets should reflect information needed to improve model performance and the utility of model products.

Ocean Noise: Ongoing and expanding human activities in the oceans produce noise that affect species known to be acoustically sensitive or use sounds to communicate. Varieties of these species (e.g., sea turtles, fish, and marine mammals) travel through or reside within GRNMS. The Sanctuary Advisory Council has supported increased monitoring of ambient ocean noise, including establishment of a sound monitoring station within Sanctuary waters. The Council's interest in understanding noise impacts on sanctuary resources corresponds with several existing BOEM Environmental Studies Program priorities: increased understanding of population levels and migratory patterns of species within the Mid- and South Atlantic region; monitoring of ocean noise levels and cumulative impacts; and research on direct impacts to selected species (e.g. humpback whales). The Council supports continued funding for these identified projects and requests that the BOEM look to expand these acoustic studies to incorporate a wider array of species that cross taxonomic boundaries, such as crustaceans and molluscs (e.g., squid and octopus), fish and reptiles are included.

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Disturbance, Recovery and Resilience: Activities associated with the BOEM's OCS energy and mineral mining programs have the potential to result in acute and chronic direct physical disturbance to seafloor habitats (e.g. from sand-gravel mining, anchors, and chains for platforms). While minimizing disturbance should be a priority, research that enhances a general understanding of the disturbance ecology of target areas can improve prediction and facilitate inference of effects from various activities, while minimizing ecological surprises.

While the timing and status of future energy development and mineral mining in the South Atlantic is dependent on a variety of economic, political and environmental factors; it is important that the Bureau of Ocean Energy Management move forward with implementing core monitoring and research necessary to understanding the regional resources. We would also be happy to discuss opportunities to link the ongoing research in the Sanctuary with current and future BOEM Environmental Studies Program monitoring and research activities. Thank you for the opportunity to share our feedback.

Sincerely,

A handwritten signature in black ink, appearing to read "Rick DeVactor". The signature is fluid and cursive, with a large initial "R" and "D".

Rick DeVactor  
Chair, Gray's Reef National Marine Sanctuary Advisory Council

cc: Dr. Pat Roscigno, BOEM Gulf of Mexico Studies Chief  
Dr. Mary Boatman, Renewable Energy Studies Chief  
Dr. Jeffery Reidenauer, MMP Branch Chief  
Dr. Brad Blythe, Chief of the Branch of Biological and Social Sciences, Division of Environmental Sciences  
Sarah Fangman, Superintendent, Gray's Reef NMS  
Dr. Billy Causey, Director, ONMS Southeast, Gulf of Mexico, Caribbean Region