

29 November 2017

John Armor  
Director  
Office of National Marine Sanctuaries  
NOAA's National Ocean Service  
1305 East-West Highway, 11th Floor  
Silver Spring, MD 20910

Dear Mr. Armor,

The users of national marine sanctuaries are critical voices in communicating the value of these special places, and the opportunities they provide, to the community. Increased engagements with these users are already yielding positive outcomes, but increases in human activity could result in negative impacts to sanctuary resources. Understanding the links between patterns of use and the condition of sanctuary resources is critical for effective conservation and management. Given the remote location of Gray's Reef National Marine Sanctuary (GRNMS), it has been challenging to identify, monitor and engage recreational users of the sanctuary. For these reasons, the GRNMS Advisory Council requests that the Office of National Marine Sanctuaries (ONMS) increase resources and support to obtain high-quality visitor use data. This will help effectively manage the balance of potential increased visitation with the health of the sanctuary.

Over the last two years, the SAC has worked with GRNMS staff to increase engagement efforts and use by recreational anglers and divers. A variety of outreach by GRNMS SAC and staff have engaged anglers and divers, including

1. Installing boat ramp signs at marinas and boat ramps along the Georgia coast
2. Organizing a Recreational Fishing Working Group to build trust among anglers
3. Conducting focused communication through participation at Kingfish tournaments, the Savannah Boat Show, and direct outreach to dive shops and sportfishing clubs
4. Identifying fishing as a communications theme for the foreseeable future thereby incorporating fishing into all exhibits, events, and marketing collateral

This increased engagement with user groups is already resulting in benefits, including improved visibility, trust, relationships, perception, partnerships, and community support.

However, there is an underlying challenge in tracking the current visitor use at the sanctuary and the potential impacts on the sanctuary's natural resources. During both the March and September 2017 SAC meetings, council members raised concerns about the absence of reliable indicators of human-use and ecological status. This included the inability of GRNMS to quantify current and future human activity and evaluate any related ecological impacts. Such information is critical to understand patterns of change, identify the status and dynamics of sanctuary resources, as well as if and when management interventions might be necessary. The GRNMS Science Advisory Group (SAG) was tasked with commenting on these issues and to provide examples of potential approaches to assess patterns of human-use and potential ecological impacts.

The SAG review identified several potential impacts of increased human use on Gray's Reef:

1. Upsurge in human-caused noise resulting from an increase in vessel traffic
2. Disturbance of seafloor communities by divers
3. Declines in the number of large fish by anglers that could lead to cascading impacts across reef and sand communities due to their ecological role as predators.

4. Increases in marine debris
5. Negative water quality impacts from vessel discharge
6. Introduction and proliferation of invasive species through vessel transport and as a consequence of ecological disturbances that can increase the survival of invaders

In addition, the SAG identified several existing monitoring and research activities that could serve as a foundation to measure ecological change both locally at GRNMS and regionally. Specifically, these are:

1. Oceanographic conditions based on sensors deployed at the GRNMS data buoy
2. Fish and invertebrate monitoring at ledge habitats
3. Underwater sound – existing passive sound recorders are deployed in the sanctuary
4. Using regional fish population and ecological assessments to understand patterns and dynamics of the larger region surrounding GRNMS
5. The use of regional climate change assessments and related products can provide important regional context for changes in GRNMS

Further, related science activities focused on synthesizing our understanding of ecological connectivity and climate vulnerability could also help management understand responses related to species and community-level resistance to change and ecological resilience.

While these monitoring and research projects are valuable in understanding ecological change, comparable effort needs to be made to understand socio-economic characteristics. As you are aware, management of national marine sanctuaries is significantly enhanced with an understanding of the basic patterns of human-use and regular monitoring of compliance with regulations. Data characterizing the frequency, variety, and duration of visitor activities at GRNMS has proven difficult to obtain. Therefore, significant gaps exist in our understanding of recent patterns of human use.

Currently, data on visitor use are limited to that obtained from boarding reports, underwater acoustics records, enforcement patrols, and opportunistic on-water observations. The number of air and sea patrols is limited due to the time and costs associated with traveling to this offshore destination. Efforts to identify alternative means to track use and compliance are being explored by GRNMS staff and the SAC. This includes consideration of additional data sources, such as remote sensing, satellite imagery, shore-based radar, and AIS navigation. The costs, analysis requirements and value to GRNMS vary by data source. New tools are also being considered, including buoy-mounted cameras and user feedback technologies. Finding an appropriate and cost effective suite of tools is an important step towards establishing a baseline that can be regularly updated and then used to help understand the relationship between ecological condition and human use drivers.

As sanctuaries such as Gray's Reef work to increase recreational engagement and visitor use, finding capacity to track the impacts can be challenging. We ask that you consider increasing the resources and support to more effectively evaluate visitor use activities to obtain a better understanding of the potential impacts to natural resources. Thank you for your consideration on this important topic and we would welcome your thoughts and continued discussion.

Sincerely,



Michael D. Denmark  
Chair, Gray's Reef NMS Advisory Council



Dr. Peter Auster  
Chair, Gray's Reef NMS Science Advisory Group