
Executive Summary

The Sanctuary

Located in the northwestern Gulf of Mexico (Gulf), 70 to 115 miles off the coasts of Texas and Louisiana, Flower Garden Banks National Marine Sanctuary (FGBNMS or sanctuary) includes three separate undersea features: East Flower Garden Bank, West Flower Garden Bank and Stetson Bank. The Banks range in depth from 55 feet to nearly 500 feet and are underwater hills formed by rising domes of ancient salt. The Banks provide a wide range of habitat conditions that support several distinct biological communities, including the northernmost coral reefs in the continental United States. These and similar formations throughout the northern Gulf of Mexico provide the foundation for essential habitat for a variety of species. The combination of location and geology makes FGBNMS extremely productive and diverse, and presents a unique set of challenges for managing and protecting its natural wonders.

East and West Flower Garden Banks were designated a national marine sanctuary in 1992 for purposes of protecting and managing the conservation, ecological, recreational, research, education, and historic and aesthetic resources and qualities of these areas (P.L. 102-251). Stetson Bank was added to the sanctuary in 1996 (P.L. 104-283). The management plan for FGBNMS was originally developed in 1991 as part of the designation process (56 FR 63634). The Office of National Marine Sanctuaries (ONMS) is required to periodically review sanctuary management plans to ensure that sanctuary sites continue to best conserve, protect and enhance their nationally significant living and cultural resources. Upon such review, NOAA has decided to update and revise the 1991 Flower Garden Banks management plan to address recent scientific discoveries, advancements in managing marine resources, and new resource management issues.

In September 2006, the sanctuary embarked on its first Management Plan Review (MPR), a public process to examine the original designation documents, management plan and regulations, and evaluate them for the future. The sanctuary mission—revised with review of this management plan—is to identify, protect, conserve, and enhance the natural and cultural resources, values, and qualities of FGBNMS and its regional environment for this and future generations.

Scope of the Issues

During the scoping phase of the management plan review, FGBNMS staff collected and summarized input from the public on potential resource protection and management issues to be addressed in the revised management plan and regulations. Taking into consideration the advice and recommendations from the FGBNMS advisory council, sanctuary staff identified six priority issues: regional habitat protection (sanctuary expansion), education and outreach, enforcement, fishing impacts, pollutant discharge, and visitor use. These issues were further characterized and discussed in working groups, at advisory council meetings, and through public workshops. They have been addressed in the development of the action plans as part of this revised management plan and are summarized below.

Sanctuary Expansion

Numerous banks and associated topographic features in the northwestern Gulf of Mexico, like the Flower Garden Banks, have unique or unusual structural features, and may be ecologically linked to each other. Many of these geological and biological features exist outside current sanctuary boundaries. Additional features were revealed through the collection of high-resolution multi-beam bathymetry after the present sanctuary boundaries were established. These features may be highly vulnerable to certain anthropogenic impacts that alter the physical, chemical, biological, or acoustic environment. It is proposed that selected features be evaluated for inclusion under the management and protection of the ONMS.

Education and Outreach

The level of awareness, understanding and appreciation of FGBNMS varies greatly among users and other members of the public. In many cases, this is inadequate to produce changes in individual attitudes, behaviors and/or community decision-making processes that affect the health of sanctuary resources. The progress made in engaging recreational SCUBA divers and K-12 educators and students needs to be sustained while developing programs that target other direct users of the sanctuary, as well as increasing general public awareness and visibility of the sanctuary.

Research and Monitoring

Science in FGBNMS plays a vital role in making informed resource management decisions. This scientific knowledge base is gained through general exploration and habitat characterization, investigations of specific research questions, and routine monitoring of resource health. Information gathered by the sanctuary science team and its partners is essential for expanding upon existing baseline data, comparing existing habitat conditions with past conditions, and targeting the most important management issues.

In order to determine the impacts of fishing and diving on sanctuary resources, a process to evaluate the need and design for a research area was proposed during the management plan review. The implementation of this process would build on several workshops and the development of a Research Area Working Group, and would include input from members of the sanctuary advisory council, scientists, fishers, divers and constituents from other user groups.

Resource Protection

Diving Impacts

Potential impacts on sanctuary resources from visitation by SCUBA divers are an ongoing concern. Anecdotally, divers have noted damage to the coral reef likely caused by recreational and research divers. Additionally, some marine animals such as rays and whale sharks may be negatively affected by interactions with divers who attempt to attract and touch the animals. Sanctuary staff lack quantitative information on direct and indirect human impacts to sanctuary resources from diving activities, and specifically, on whether there are any differences between impacts from recreational diving activities and scientific diving activities. The collection of information on diving impacts is addressed in the Research and Monitoring Action Plan while the outreach program to inform divers about wildlife interactions is an activity in the Education and Outreach Action Plan.

Enforcement

Enforcement is logistically difficult due to the distance of FGBNMS from shore and limited access to the site. The sanctuary relies heavily on assistance from the U.S. Coast Guard (USCG) and the NOAA Office for Law Enforcement (OLE) for enforcement efforts. In addition to its research and education mission, the sanctuary's vessel, R/V *Manta*, would be used as a platform for the USCG and OLE to supplement the sanctuary enforcement on the water. The R/V *Manta* will be used to make specific surveillance runs with law enforcement personnel. Sanctuary staff will coordinate with OLE and the USCG to have enforcement authorities on board for enforcement missions. Additionally, FGBNMS staff is developing a voluntary incident reporting system and is seeking to improve enforcement coordination with federal and state agencies to better address enforcement needs within the sanctuary.

Fishing Impacts

Fishing activities may negatively affect and threaten the natural living resources of FGBNMS. The influence of fishing activities within the sanctuary is not well documented, but concerns exist about both direct and indirect fishing-related impacts on marine ecosystems. Direct impacts of fishing can result in reduced fish biomass, while indirect impacts include secondary effects on species interactions, habitat alteration/damage, reduced marine biodiversity, and economic impacts. Specific concerns include targeted fishing efforts on particular fish species, focused fishing during spawning aggregations, injury to corals and other organisms by lost and discarded fishing gear, and discarded fishing bycatch.

Pollutant Discharge

Discharge of pollutants from sources inside and outside the sanctuary may have potentially detrimental effects on sanctuary resources. The quality of coastal waters of the northern Gulf of Mexico is in decline due to pollutants associated with the discharge of major river systems (such as the Mississippi and Atchafalaya) and general coastal runoff throughout the region. Predominant current patterns direct much of this water away from FGBNMS, but minor changes in circulation patterns could bring contaminated water to the sanctuary.

Many vessels enter the sanctuary for diving, fishing, and research. Pollution concerns from visiting and transiting vessels include exhaust, oil spills, fuel spills, human waste, and bilge discharge from fishing vessels. The discharge of untreated sewage from vessels is not allowed within or into the sanctuary. However, discharge from a U.S. Coast Guard approved marine sanitation device is allowed. Other discharges from vessels or oil and gas platforms include graywater from showers and galleys, debris from maintenance operations, and incidental release of petrochemicals from engine use.

Visitor Use

The primary visitors to FGBNMS are recreational SCUBA divers and recreational fishers. Although the precise status and trends of visitor use in the sanctuary are not known, visitation by SCUBA divers and fishers is estimated to be relatively low compared to other sanctuaries. This is primarily due to the distance of the banks from shore and possibly a lack of public awareness about the sanctuary. However, observations from sanctuary staff, long-time users of the sanctuary, and others

suggest that the level of fishing activity has been increasing in recent years. In addition, the sanctuary is becoming internationally known as a prime SCUBA dive destination.

As interest and use in the sanctuary increases, there will potentially be conflicts among users. As an example, recreational fishers and dive charters may compete for use of the same reef areas because both users target the same types of large fish. In addition, vessel operation in an area where diving is occurring can pose a potential safety risk. However, this risk can be reduced through adherence to dive flag requirements. Further, increased visitation will increase demand for mooring buoys. These combined pressures are an important management priority to minimize user conflict, promote safe practices, and protect sanctuary resources.

Operations and Administration

Additional staffing and infrastructure resources are required to meet the expanded public demands and expectations raised by the management plan review process and to respond to legal mandates and policies. Strengthening the sanctuary's base-level staffing, facilities infrastructure and program support to effectively meet the basic needs of sanctuary management is one of the priorities of this management plan.

Organization of this Document

This management plan is organized into six sections. Section 1 provides background information on national marine sanctuaries, FGBNMS, and the purpose and need for updating the management plan. Section 2 is an overview of the institutional setting in which the sanctuary operates and of the regional ecosystem of the northwestern Gulf of Mexico. It also describes the local environment of East and West Flower Garden Banks and Stetson Bank. Section 3 contains the action plans, which detail the management strategies and activities to address the priority issues of FGBNMS and meet the purposes and policies of the National Marine Sanctuaries Act (NMSA) (Appendix I). Section 4 provides information on the public comments received on the draft management plan and a summary of the changes that were made to the management plan as a result. Section 5 provides a summary of the environmental analysis of the two alternatives considered: 1) no action, and 2) the preferred alternative of revising the management plan and making modifications to FGBNMS regulations (Appendix II). Section 6 lists the sources cited in this document.

Acknowledgements

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