A Look Ahead

The year 2011 is an important year for Flower Garden Banks National Marine Sanctuary. In October 2010, after three years of development and public involvement, NOAA released a completely revised and updated draft management plan for the sanctuary. This plan will provide the framework for how the sanctuary will be managed over the next five to ten years. It identifies the priority issues that NOAA will address, and provides benchmarks and strategic guidance for research, education and resource protection programs. The development of this management plan has benefitted from countless hours of effort by the Flower Garden Banks citizen's advisory council and other members of the public. A significant recommendation contained in this plan is that the sanctuary should be expanded to include additional reefs and banks in the northwestern Gulf of Mexico. In 2011, NOAA will proceed with an open, public process to identify the extent and scope of this expansion. This will be an important step in providing additional protection for the Gulf of Mexico ecosystem.

Supporting Jobs, Communities and Culture

The reefs and banks of the northwestern Gulf of Mexico, including the Flower Garden and Stetson Banks, are utilized by a variety of user groups. Recreational scuba divers constitute the largest user group within Flower Garden Banks National Marine Sanctuary. An estimated 1,500–2,000 divers visit the sanctuary in an average year. Recreational and commercial fishing are common and economically important activities in the northwestern Gulf of Mexico. The northwestern Gulf of Mexico is home to one of the most active areas of oil and gas exploration and development in the world. Approximately 150 oil and gas platforms are located within 25 miles of the existing boundaries of the sanctuary. One production platform is within the boundary of East Flower Garden Bank. The sanctuary has a long history of research and exploration that continues today. Scientists from a variety of universities, research foundations, and government agencies are constantly monitoring and evaluating the fauna and flora of the sanctuary.

NOAA's Office of National Marine Sanctuaries is committed to supporting lives and livelihoods across the nation and in sanctuary communities through socioeconomic research and monitoring to understand the economic and social drivers of sanctuary resources and improve management practices.

Flower Garden Banks National Marine Sanctuary Advisory Council Members

Officers

Chair: Larry McKinney

Vice Chair: Frank Burek

Non-Governmental Members

Recreational Fishing: Irby W. Basco

Recreational Fishing: Matt Bunn

Commercial Fishing: Joe Hendrix

Commercial Fishing: Michael Jennings

Research: Will Heyman

Research: Larry McKinney

Recreational Diving: Frank Burek

Recreational Diving: Lori Traweek

Diving Operations: Cher Walker

Diving Operations: Frank Wasson

Oil and Gas Industry: Clint Moore

Oil & Gas Industry: Rebecca Nadel

Conservation: Ellis Pickett

Conservation: Page Williams

Education: Dale Loughmiller

Education: Jacqueline Stanley

Governmental Members

Federal Government
Bureau of Ocean Energy Management, Regulation and Enforcement (non-voting): James Sinclair

U.S. Coast Guard (non-voting): LCDR Carmen DeGeorge

NOAA National Marine Fisheries Service (non-voting): Rusty Swafford

NOAA Office of Law Enforcement (non-voting): Charles Tyer

U.S. Environmental Protection Agency (non-voting): vacant

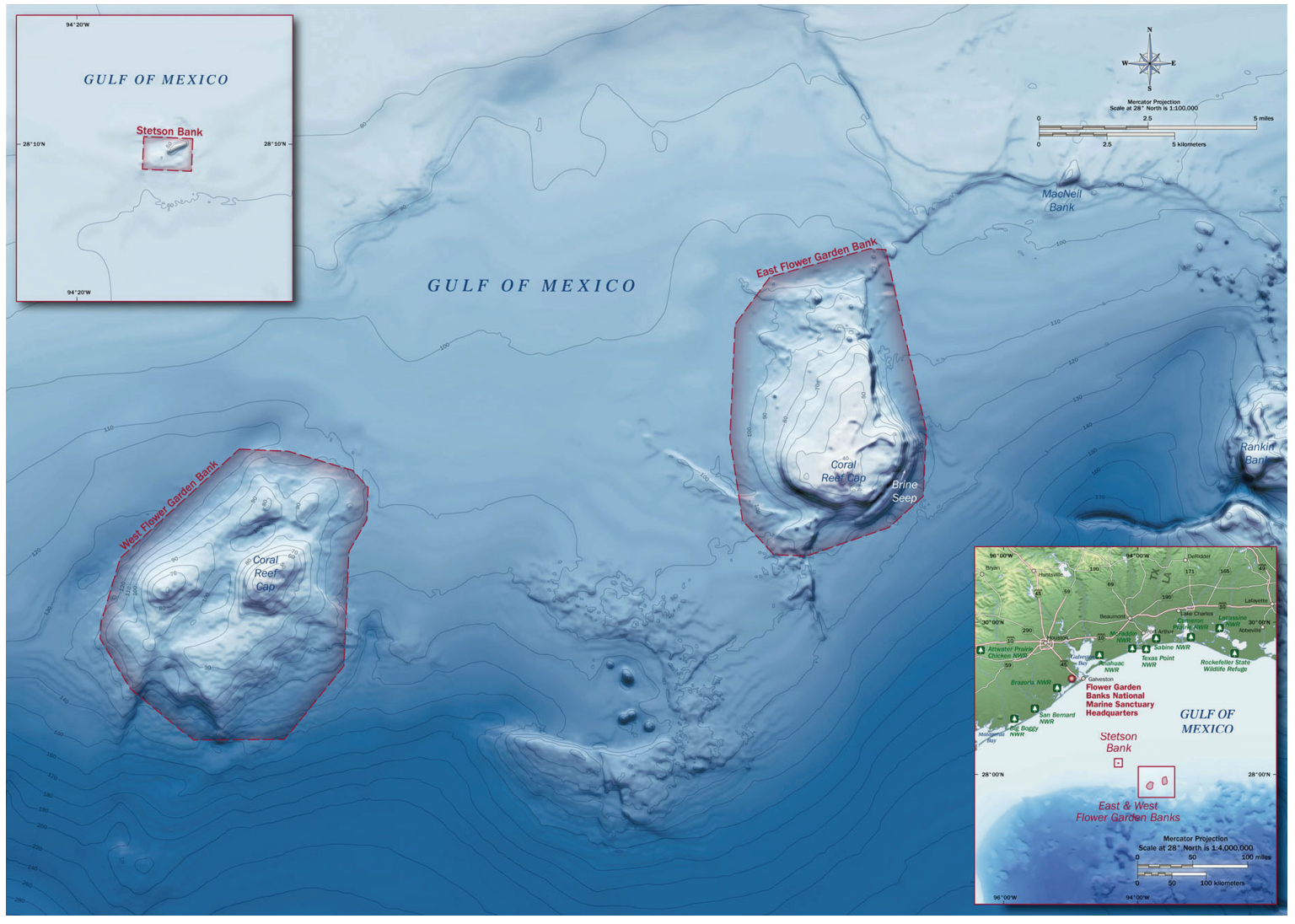
NOAA Flower Garden Banks NMS (non-voting): G.P. Schmahl

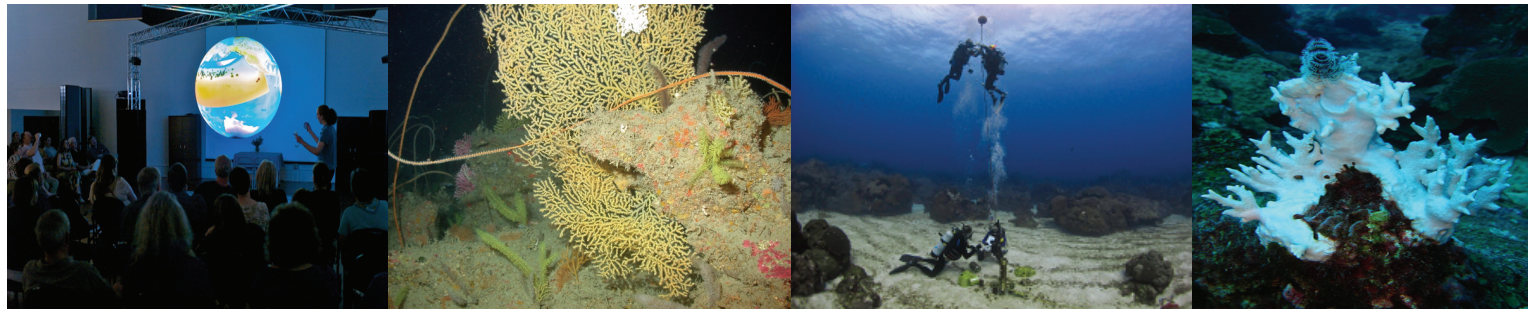
Sanctuary Advisory Council Coordinator
Jennifer Morgan

http://flowergarden.noaa.gov

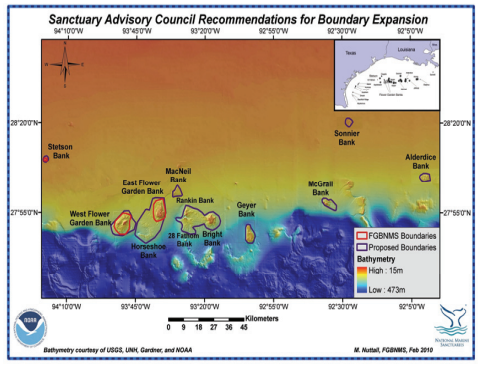
National Marine Sanctuaries
National Oceanic and Atmospheric Administration
FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY

2010 ACCOMPLISHMENTS





Flower Garden Banks National Marine Sanctuary lies 70 to 115 miles off the Texas-Louisiana coast, where underwater "gardens" emerge from the depths of the Gulf of Mexico. The sanctuary encompasses three submerged features called salt domes that harbor the northernmost coral reefs in the continental United States. These premier diving destinations feature numerous Caribbean reef fish and invertebrate species and are frequented by majestic whale sharks and graceful manta rays. Established Jan. 17, 1992.



Draft Management Plan

Flower Garden Banks National Marine Sanctuary released a Draft Management Plan and Environmental Assessment. Based on several years of scientific study and public input, the plan identifies key issues facing the sanctuary over the next five to ten years. It serves as the framework for addressing those issues and lays the foundation for protecting, conserving, and enhancing the sanctuary and its regional environment in the Gulf of Mexico for this and future generations.

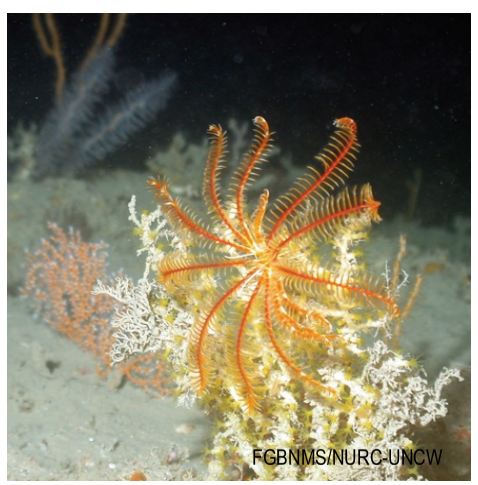
The Draft Management Plan proposes minor changes to sanctuary regulations. It also includes two elements that are particularly likely to interest the public:

- recommendation to expand sanctuary boundaries to include additional reefs and banks in the northwestern Gulf of Mexico, and
- further study to determine the need for a scientific research area within the sanctuary to better understand the impacts of hook and line fishing and scuba diving.

These could be considered for action prior to the next management plan review and will necessitate further analysis through an Environmental Impact Statement.

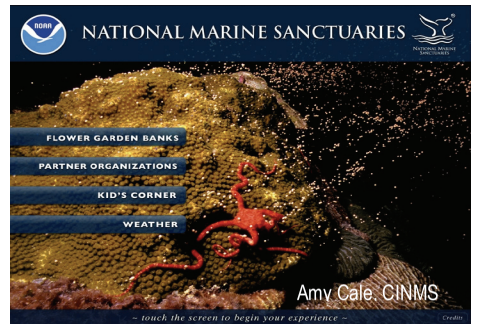
Deepwater Horizon Oil Spill

The Flower Garden Banks National Marine Sanctuary science team conducted monitoring as part of the Natural Resource Damage Assessment effort for the MC252 Deepwater Horizon Oil Spill. In addition to collecting baseline benthic data, the team deployed devices to assess hydrocarbons (oil and gas) in the water column. A set of four semi-permeable membrane devices (SPMDs) were installed at East and West Flower Garden Banks, Stetson Bank, and Sonnier Bank on buoyed lines from the sea floor. The devices trap hydrocarbons in lipid filled ribbons as the water passes through the SPMD cages and must be changed out every month for analysis. The sanctuary science team will continue this monitoring effort through at least January 2011. To date there has not been any indication of Deepwater Horizon oil at any of the sanctuary sampling sites, although analysis is ongoing.



Sanctuary Establishes Monitoring in Twilight Zone

Below the reef cap, from about 150 to 500 feet deep, less sunlight reaches the bottom. About 98% of the sanctuary is in this "twilight" area that scientists call the mesophotic zone (*meso* = middle, *photic* = light). The challenges of conducting operations at these depths, have prevented detailed explorations and monitoring such as those conducted on the shallower reef cap. However, technological advances in recent years, especially in the quality of photographic equipment and the acquisition of high-resolution maps of the seafloor, have overcome some of the barriers to monitoring these deeper areas. In 2010, the sanctuary's science team, with partners from University of North Carolina - Wilmington, National Centers for Coastal Ocean Science, and Harbor Branch Oceanographic Institution initiated an ambitious program to establish base-line information and provide on-going monitoring of the habitats in the twilight zone using a remotely operated vehicle. The resulting information will be a valuable resource when determining impacts of, and appropriate responses to, acute events such as major oil spills or more chronic impacts such as declining water quality.



Using NOAA Technology to Increase Community Awareness

Flower Garden Banks National Marine Sanctuary lies 115 miles from land and 55 to 500 feet deep. Its remote location makes it difficult for most people to visit in person. To meet that challenge, the sanctuary staff increasingly uses technology to bring the sanctuary to the people. During NOAA's Ocean Discovery Day in Galveston, the sanctuary featured NOAA's Science On a Sphere®, a room-sized, global display system analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change and ocean temperature can be shown on the sphere, which is used to explain what are sometimes complex environmental processes, in a way that is simultaneously intuitive and captivating. Students from local schools and life-long learners attended formal presentations with the sphere prior to Ocean Discovery Day. On the day of the event, more than 1,000 visitors had an opportunity to see the sphere and talk to NOAA scientists about the data being illustrated. On a longer-term basis, four stand-alone kiosks were installed at key locations in Galveston and Waco, Texas. The kiosks feature touch screens that visitors can navigate like a website. The content is well supported with images and short video clips from the sanctuary and a Kid's Corner featuring an interactive collage of sanctuary life. For local boaters and fishers, the kiosk has a link to real-time weather and sea-state information through an internet connection. Sanctuary staff will continue to explore the possibilities and opportunities for using technology to enhance awareness of the sanctuary and its value to local communities and the nation.

Monitoring Validates NOAA's Coral Bleaching Alert System

NOAA's Coral Bleaching Alert System uses satellite data on sea surface temperature to determine the likelihood of coral bleaching at specific locations. This year, data collected during late summer indicated a high potential for bleaching at Flower Garden Banks National Marine Sanctuary. In fact, the level of bleaching alert issued was similar to that of 2005 when a serious bleaching event affected up to 50 percent of the corals on the sanctuary's reef caps. Subsequently, the sanctuary science team noted extensive bleaching during a routinely scheduled cruise to conduct benthic and fish surveys. Observations indicated bleaching affecting multiple species, including fire coral *(Millepora alcicornis),* and several star corals *(Montastraea cavernosa, M. franksi,* and *Siderastraea siderea)*. Bleaching events are caused by elevated water temperatures and could be potential indicators that climate changes are beginning to negatively impact reefs in the Northwestern Gulf of Mexico. The sanctuary science team will continue to monitor the events and develop management strategies where appropriate.